DRAGON USER

The independent Dragon magazine

December 1988

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Brian Cadge blew up this month.

Apologies to Ken G. Smith, whose review of *Copycat* appeared under Roland Hewson's name last month, and thanks to Roland for pointing this out in Ken's absence.

Editorial

MY conscience is salved - I'm up to date (as of six weeks ago, as far as you the readers are concerned) with prize tapes and the rest. IF there is anyone out there who thinks we owe them a tape, and who hasn't received it by now, please drop us a line (state the issue). No hurry.

Here I am at that time of the month again, wondering if our Dragon will make it out in time for the start of next month. This time we have the Colour Computer Convention coming along, and want to make sure that nobody has an excuse for not knowing about it. Cross fingers, get on the phone ... And will yours truly make it to Weston? Another of life's mysteries.

We have a pheonomincal amount of software under review this month, plus new information from old friends Penn and Compusense. Something for everyone this Christmas. Start saving!

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How to submit articles

The quality of the material we can publish in *Dragon User* each month will, to a very great extent depend on the quality of the discoveries that you can make with your Dragon. The Dragon computer was launched on to the market with a powerful version of Basic, but with very poor documentation.

Articles which are submitted to *Dragon User* for publication should not be more than 3000 words long. All submissions should be typed. Please leave wide margins and a double space between each line. Programs should, whenever possible, be computer printed on plain white paper and be accompanied by a tape of the program.

We cannot guarantee to return every submitted article or program, so please keep a copy. If you want to have your program returned you must include a stamped addressed envelope.

Letters

This is your chance to air your views — send your tips, compliments and complaints to Letters
49 Alexandra Road, Hounslow, Middlesex TW3 4HP

Ed's word

Brian Cadge has suffered a computer blowup, which has put him out of action this month. He also says that he has been using up his letters faster than usual, so if you want to know anything about the Dragon, now is the time to get in ahead of the crowd.

I am also looking for volunteers to review *Starke Island*, a Hargrave adventure on tape, War Hammer of Gillibran, a two-disc adventure from Orange, and Sprite Designer, a utility from Orange. Drop us a line.

Ed.

Board bother

I write to you in an attempt to rid myself of sheer frustration, in the hope that you can bring your influence to bear to end its cause.

What I am rambling about is the frustration created by a User Group that supposedly has a bulletin board on Micronet. I am referring of course to *The Dragon's Tail*.

Investing in an interface for my Dragon in April this year, I looked forward to enjoying a friendly, informative and learning exploration into what I expected to be an extention to the knowledge I was attempting to acquire about this friendly computer. Alas, it was not to be.

To be greeted with 'Seasonal Greetings' in April, I thought was a bit old hat, however, still to see them in October leaves me dumbfounded.

I have been a Dragon user for two years and I belong to a thriving although small group of enthusiasts. I have given my grandchildren a Dragon each, and from my contact with various users of this excellent computer it is far from an unworthy end. There are many users with modems who must feel the same way, not only can you contact them but also other computer users on all manner of micros. The potential is there for a multi user group.

But to get back to the Dragon, would it be worth the magazine running this board alongside the publication? If not, could not the 'Editor' of *Dragon's Tail* (Micronet page No. *810427*) be interviewed as to his intentions? Julian Croxhall, mbx 992893036 is the man, and I have attempted to push him into replying with various

Every month we will be shelling out a game or two, courtesy of our supplies, to the reader/s who send the most interesting or entertaining letters. So send us your hints and your opinions, send us your hi-scores and suggestions. Send us your best Dragon stories. What d'you think we are, mind readers?!

Protection, no racket

I am writing in response to Paul Grade's comments about software protection in his October column. I assume that he is referring to disc software, as tapes can very easily be backed up with a double tape deck. Most Dragon discs can be backed up simple by using the commands available through DOS. However, there are a few exceptions. To my knowledge the discs that cannot be backed up are only those published by Pulsar Software, including several of my own titles. Consequently I assume that his criticisms are aimed at those of us who have worked for Pulser.

As a programmer, I dispute Paul's view of him 'having the right to be able to make a backup copy' of any software he buys. Any software written is under the copyright of either the author and/or the publisher. Protection is added to enforce the copyright. The protection only stops people making backups as a side effect of its real purpose. Like it or not, there are always people who will try to pirate software, even on the Dragon. The protection is there simply as an attempt to foil such efforts. This surely cannot be wrong, as pirating software infringes copyright, which is illegal, so by devising methods of protection we programmers are only enforcing the law which is there to protect us.

Paul is right when he says that if someone is determined enough they will break any protection. However, not everyone who might pirate software has the knowhow, and so may give up. If I sell just one more copy of a protected game, it is worth it. In my opinion software should be bought on its merits, rather than on whether it can be copied. If I cannot get back enough for the work I do for the Dragon, then I will have to stop programming for it and divert my attention to another machine where I will be properly paid for my efforts. To set Paul's mind at rest, if he or anyone else does have their disc corrupted, I'm sure if they return it to the publisher explaining what has happened they will get a replacement.

On a lighter note, I must come back to D J Platt's letter of the same issue. I haven't written a Cobol shoot'em up, but I have played one! It was a space invaders game compiled with Professional Cobol, on an Epson OC, and pretty darn difficult it is too.

Jonathan Cartwright Starship Software, 23 Tintern Road
Cheadle Hulme, Cheshire SK8 7QF

ALTHOUGH there isn't anything in the law of nature to suggest that software users should have the right to make backup copies, in industrial software this right is granted 99% of the time, because the chaos caused by the failure of an only copy is so severe that the software is generally considered non-viable without that capability.

The same can't be said of games software. The theory that publishers will replace corrupted discs on return of the original is fine in theory and often works very well (and is sometimes vital. It is standard practice to replace failed Sinclair QL microdrive cartridges on demand, for instance, even though they can be backed up, because corruption or incompatibility is sufficiently common that the service is needed to maintain faith in the medium). However, most users have come across software companies which are simply not organised enough to maintain a reliable replacement service.

Dedicated pirates can always find a way round copy protection. The question in my mind is whether protection on discs discourages enough casual knocking-up of copies for friends to make a real difference to the market. Figures have been compiled which show the record industry loses millions of pounds' worth of business from casual consumer copying. But I remain sceptical about the extent of the loss. We all know that a firm, unshakeable intention to buy so-and-so's record/CD/game next time you walk into Virgins' can evaporate in a few days to be replaced with another, etc., etc., so that only a small fraction of the units you thought you couldn't live without actually get purchased. Purchasers only have so much money.

It then becomes the publishers choice whether to leave discs open and lose units ot casual copying, or close them, and lose sales to people who don't trust discs/ were looking for something to shell out to their friends.

Certainly Paul is right about one thing: all the protection in the world won't help if games aren't selling. The best guarantee of increased sales is to write really attractive games, an objective which a number of Dragon programmers have been meeting in recent months.

messages, but to no avail. He is alive and well, because he is advertising in the For Sale sections.

So please, all you Dragoners, let's create some enthusiasm and instead of laying our friendly Dragon to rest let's become more positive about its further, because there is lots of life in the Old Dragon yet.

Trevor Purnell
5 Ewood Drive
Cantley
Doncaster
S. Yorks
DN4 6AU

From one madhouse to another

WITH reference to Paul Grade's *Dragonsword* of October 1988, I would like to make two points.

1) The NDUG is often mentioned in *Dragon User* but the address isn't (I know, it's on page 4 this month).

2) He asks about adventure programs with a different scenario. I have a Radio Shack TRS-80cc game which runs on my Dragon 32, and is called *Bedlam*. In it one is mistakenly(!) locked up in a lunatic asylum and has to escape with the help or hindrance of the staff and inmates. I can't! Keep up the good work.

Kevin Barrett
c/o BIH Ltd.
Sumburgh Airport
Virkie
Shetland

OH, we try to slot them in every two or three months. Talking of strange scenarios, imagine arriving at Sumburgh airport, late after losing your flight electrics over Carlisle. The pilot, a singing Dutch computer programmer, walks into the airport with a shield and quarterstaff slung over her shoulder, and a jolly man in tweeds and a little beard gets the shop to open up and sell you some sarnies. Eventually, after many adventures, you arrive by Volvo at Uppsala Castle, where Gandalf tries to eject you for, being late, you have not yet donned the mantle of the Forodrim.

I suppose that doesn't count, because we're back to Tolkien again. Anyway, that's what happened to me on my last hols, if anyone wants to write an Adventure about it. The north of Scotland and the Shetlands is one of the most impressive aerial panoramas I have ever seen. What a nice place to live, albeit a bit remote from the Hammersmith Odean.

Missing: a crocodile of characters

ONCE again DU has brought us a clever program in the April issue, for drawing electronic circuits, by D A Craig.

Unfortunately, as printed (in my copy, anyway), the program suffers from what Beachcomber in *The Daily Express* used to call Printer's Frolic. (To be fair,' printers and typists are often blamed for errors in the original draft).

As printed, the following line numbers are longer than a 'magazine page line' and have a character missing at the end of the first (or second) page line. To make it quite clear, I give the last three characters of the page-line as printed, together with the missing character in brackets. When inserting the character, the brackets should of course be ignored:

Line no.

2070 U3N(L)
2080 U3N(L)
2090 U3N(L)
2100 U3N(L)
2110 U3N(L)
2110 U3N(L)
2120 D3L(1)
2130 (first) D3N(R)
2130 (second) U3N(L)
2140 (first) D3N(R)
2140 (second) U3N(L)
2260 (first) U1L(1)
2290 U4L(4)

Also at the end of the page line of the following, the character in the brackets should be deleted, again ignoring the brackets:

2250 L1D(1)
2260 (second) D2U(1)

I think Mr. Craig has produced a remarkable program for our faithful Dragon, but I was a little disappointed that as published it will not print out the diagram as hard copy. The screen dump referred to as 'later on the tape' has not appeared. Not everyone will have the November '87 and July '84 issues of DU referred to for the dump. Any chance of Mr. Craig's dump appearing in a future issue, please?

Has anyone an inspiration as to the significance of the handwritten '8' at the far right of line 400?

B Yeoman Walker
Forest House
Liverpool Road
Prescot
Merseyside

REMARKABLE! Or, Weird! as my friend the engineer said. The best we can come up with is that somebody in the art department has a brainstorm when cutting out the bromide and scalpelled off one strip of characters to the right. You will observe that line 1830 above is one character wider than the 'truncated' lines. Artset has been known to lose the odd character in turning a line, but 'tis rare, and something I can check for. Losing an entire right margin is unknown in the annals, but we can't think of another explanation.

The '8' is very simple. This is a very rare example of 'Pasteup Person's Frolic', where an editorial mark on the artwork (the orignal listing was eight inches wide at this point) is left behind on the page ... and no-one notices until the copies are posted. Now, that isn't so rare.

I will look into the dump question. Do as you suggested about the hardware project. My role in *Practical Electronics*, apart from racing the Editor to the headlines, is to check the spelling and make sure the commas are in the right place. Stop laughing there at the back.

Still Dragon

THANK you for publishing my letter and reviews of *Edit +* and *Dynafast* in the October *Dragon User*. I humbly apologise for calling you Sir, I am not a male chauvanist really.

My reason for writing this time is to correct an impression that readers may have got that I am no longer a Dragon users. This could not be further from the truth! It is true that the majority of my word processing and spreadsheet work is done on my, dare I say it, Acorn 512 computer. This is primarily because of the 80 x 32 text screen and secondly because my newer NLQ printer plugs into it. However, my Dragon is still in regular use.

I have two databases on it for my personal filing, one of 1500 records and one of 500 records. These both use the database package DRS and I have a number of smaller databases on *FILMASTR*.

In addition I have my personal finances on it, using a program I wrote myself and which I hope you will be publishing one day soon.

I still do 90% of my programming on it, because using the Dragon's Microsoft Basic has become second nature to me and I hope to get some of my programs published in your hallowed journal. Anyway, enough of this creeping.

Computing has become an all consuming hobby with me, and it is only natural that myself and other enthusaists should want to try newer machines. You wouldn't find a car fanatic doing all his driving in a Morris Minor.

However, I agree with you that just because there are newer machines about, the Dragon should not be discarded like an unwanted toy. Dragon users have built up a lot of expertise, as well as software and hardware which is not worth a lot on the second hand market, but is still useful. I hope to be using my Dragon for many years to come, and who knows, it might become a collector's item in the same way that the aforesaid Morris Minor has.

Clive G. Scott
62 Berry Meade
Ashtead
Surrey KT21 1SG

I am not going to tick you off about your description of car fanatics after so gentlepersonly an apology! I shall wait instead for the hordes of Morris Minor fanatics to send you stern postcards. Drive another car? Why, the very idea of it!

Actually, I knew (most of us indeed, knew) a person who gave up his Dragon, and mayhap much else beside, for a car. But he was a male. They're a bit funny, these men persons.

News desk

If you have any new products for the Dragon — software or hardware — please write to The Newsdesk at 49 Alexandra Road, Hounslow, Middlesex TW3 4HP

Colour computer convention rolls . . .

THE Colour Computer Convention is set to roll on Sunday 4th December with more additions to the line-up of Dragon and Tandy supporters. The full roster at time of writing is John Penn Discount Software, R & A J Preston, Harris Micro Software and *Dragon User*, Orange Software, Computape, Pulser Software, Broomsoft, the National Dragon Users Group, the DUDE (DeltaDOS) group, the National Amstrad, Tandy and General Users Group, New Era Publications and the organisers, software and publishing house Dragonfire Services.

Proprietor Andrew Hill appealed directly to Dragon users to support the show in Dragonfire's newsletter: 'I know we're organising it, so I feel that I'm taking a little advantage when I say, and I'll keep saying from now until December, YOU'VE JUST GOTTA GO. I'd say it anyway, and I have said it about previous shows which we've had nothing to do with. Basically, if this show is not very well attended, then not only will a future show be highly unlikely, but also one or two traders could drop the Dragon ... leaving a show out of reach. So attend, please. Weston is VERY easy to get to from the South East, South West, Wales and the North. Be it by car, train or bus, your effort will surely be rewarded. This is a national show, and not a regional one - everyone who supports the Dragon will be there (and maybe one or two others). New software will be released at the show, and you have a chance to talk to those who support you. So attend, and make it a worth-while day for everyone."

Andrew wants to see at least 200 but hopes for as many as 300.

The show site at the Arosfa Hotel, Lower Church Road, Weston-Super-Mare, will include a licensed bar from 11.30am till 2.30pm and sandwiches for sale from the bar from 12 noon to 1.30pm. Entrance charges are £1.50 adults, £1 children under 16, free to registered disabled. For further details contact Dragonfire Services or phone 0495 292088 (evenings).

In the meantime, Dragonfire are promoting their new Dragon WIMP System. Running on the Dragon 64 with a disc drive and floating joystick as the mouse pointer driver, it runs under SuperDOS (E6), DragonDOS, and CumanaDOS V2 (state DOS required), and includes system software with a graphics package, icon designer and 30 page manual. WIMP System is fully compatible with standard Basic and Dos commands. Features offered include text windowing, a 'blue' screen, and over 64 icons on the disc.

WIMP System costs £12 inclusive of post and packing (UK only. Add £1.50 overseas) from Dragonfire Services, 13 PArry Jones Close,I Blaina, Gwent NP3 3NH. "This is our major autumn release, and we have another major release planned for the winter, to be released at the Colour Computer Convention," announces Andrew Hill.

Other releases available now or in the immediate pipeline include *Space Trek* I and II on tape or disc, special edition *Space Trek III* on tape only, *Dream Machine*, *The Time Machine Search* and *The Immortal Strain* on tape and disc. All these cost £4 each. *Hack-It* on tape (£3) helps games players to hack into programs for extra lives. *Jet Set Willy Screen Designer* and *Airball Screen Construction Kit*, (£5 each on disc only) both require the original version of their respective games to redesign screens to your own taste.

Dragonfire is also starting a public domain software service, and would like to hear from users in possession of public domain software, or willing to donate software of their own creation.

For further information on any of the above, please send an SAE to Dragonfire Services at the address stated. Postage and packing on cassette orders is 50p per cassettte up to £2.50, £1.25 per cassette (no limit) overseas. Payment in pounds sterling only.

Please note that software is not in the public domain unless it has been donated for this purpose by the author. Programs appearing in Dragon User and other publications are the copyright of those publications, or of the author, and must not be reproduced without the permission of all the copyright holders concerned, even for non-profit purposes.

Era counts

NEW ERA Software say that problems with their New Era communications interface have been solved.

Several users reported 'software failures' and 'unexplainable occurrences' while using scrolling bullentin boards with the software.

The problems, which are attributed to the software's interpretation of screen clearing codes, have been investigated and fixed by Roger Seawood, system operator of the Jolly Roger Dragon/Tandy Bulletin Board (01 742 1640) with the help of user Ian Jones.

New Era is expecting to release a new accounting package, *Accountancy Plus* by Mike McCullough, in early October. No price or further details are available at time of going to press, but New Era have put up 10 copies as prizes in this month's Gordon Lee Puzzle (page 26).

Enquiries to New Era Software, 37 Collins Meadow, Harlow, CM19 4EN.

D A CRAIG, author of the CAD program published by *Dragon User* earlier this year, has offered to supply copies of the program free of charge to readers sending either a blank cassette or a 5.25 inch double density disc, stating whether 40 or 80 track formatting is required. Alternatively, a disc version can be supplied on the reverse side of the cassette so that the user can load the program in from cassette and then save to disc.

Contact D A Craig at 2 Milebush Close, North Road, Carrickfergus, BT38 7RX, Northern Ireland.

English Tourist Board

THE AROSFA HOTEL
AROSFA

Lower Church Road, Weston-Super-Mare, Avon BS23 2AG

Dragon will speak to order

Stewart Orchard reports that he can supply voice synthesisers for the Dragon. The synthesiser, originally designed for the BBC Micro, has been adapted for use with the Dragon's printer port. The audio output can be used to drive either an amplifier, or headphones.

Stewart confirms that the unit is easy to use from Basic or machine code provided the user is confident with arrays and Data statements. The package includes a cassette containing starter software and information about the unit.

The units are based on the SP0156-AL1 which uses the allophone method to synthesise speech, giving an unlimited vocabularly.

Units will only be constructed to order, so allow time for component buying and construction when awaiting delivery. Units cost £15 each from Stewart Orchard, 6 Hendon Avenue, Ashtree Park, Carbrooke, Thetford, Norfolk IP25 6JW.

One disc runs out, one arrives

Pro-Tech Systems have announced that they are now coming near to the end of their stock of Cumana disc interface cartridges for the Dragon. These are available with disc drives from as low as £110 (interface and uncased drive) or from £173 with fully packaged Cumana drives.

On a more positive note, Pro-Tech have obtained a supply of Premier disc cartridge pcbs which will be available for the first time to kit builders. These can be supplied either with the original Delta 2 DOS chip, or the latest Phil Scott DragonDOS Plus PR Rom for Premier boards. This gives full compatibility with DragonDOS files and programs, as well as all the corrections and improved facilities which Phil Scott has incorporated into his DragonDOS Plus V4.

Pro-Tech has also made arrangements to supply units fully made up and tested by Dataspan Ltd. Details are available from Pro-Tech Systems (please send two loose first or second class stamps and your name and address in capitals) at 25, Pelican Road, Pamber Heath, Basingstoke RG26.

Power down

HARRY Whitehouse has decided to discontinue his acclaimed *A1 Supasmooth Power Supply*, which has been an important replacement power unit for the Dragon.

"We can only produce the product in batches of fifty, and that just isn't viable any more. We have only had one order in recent months." says Harry.

H C Anderson Computer are now the only source stocking Dragon Data type power supplies, costing £25. For information and import details contact H C Anderson, Englandsvej, DK-2770, Kastrup, Denmark.

Simon Jones

Orange explains DOS plus DELTA

Orange Software has obtained from Kouga Software a licence to produce Kouga's games *Ball Dozer* and *Mandragore* on disc. In a letter to *Dragon User* earlier this year, Graham Smith of Orange Software said "We would dearly like to hear from the author of a game that I briefly saw a review copy of ... it was in beautiful scrolling 3-D graphics, nothing short of a masterpiece." That game was *Mandragore* by John Foster, and Orange got their wish.

The games are available for DragonDOS and TandyDOS at £4.00 each, or both on one disc for £7.50, inclusive of postage. Please state which DOS is required. DU was tickled to see that the *Ball Dozer* leaflet features a dinosaur wearing one of Boogerall Money's 'I like beer, me' t-shirts. Cassette versions of the game are available from Kouga Software, 94 The Oval, Firth Park, Sheffield S5 6SP.

Orange also has a new music control program, *Composer X*, in the pipeline. The authors have been incorporating suggestions made by *Dragon User* reviewer Ken Smith on a preview version, and the production version is now ready for review. "We will be pricing it at £1.99 as we think it is one of those handy little utilities that people might buy as long as the price is not too high. Like so many other items of software for the Dragon, the price just cannot do justice to the amount of work the author has put into it", says Graham Smith of Orange. *Composer C* allows the user to modify songs compiled with Microdeal's popular program *Composer*.

Orange has had enquiries about Phil Scott's *DOSplus* 4.6 and *DOSplusDELTA* which has led them to clarify the purpose of *DOSplus*

"It would seem that people are expecting *DOSplusDELTA* to do slightly more than it actually does", says Graham Smith. "It's not some sort of DragonDOS/DeltaDOS software converter. We are talking about two different versions of the same operating system. *DOSplus* 4.6 is a direct replacement chip for the Dragon Data DOS chip in a Dragon Data DOS cartridge (or any of the clones), and gives several enhanced features and some totally new facilities. *DOSplus-DELTA* gives the same facilities but has been specially developed so that it will directly replace the DeltaDOS chip in a DeltaDOS cartridge. The DragonDOS and DeltaDOS cartidges use different controller chips and therefore the disc operating system has to be different in each case.

"*DOSplusDELTA* has been developed to allow anyone with a DeltaDOS cartridge to have access to the software developed for DragonDOS users, without the expense of buying a DragonDOS cartridge. With *DOSplusDELTA* installed you will not be able to read your DeltaDOS discs, but you can read DragonDOS discs. It cannot do both at once, but with a simple hardware modification to your DeltaDOS cartridge it is possible to have both chips in the same cartridge with an external switch to swap between them. This would mean that you would lose the use of the spare socket in the cartridge, which is normally reserved for the optional utility chips *Encoder09* or *Toolkit*. You cannot switch between the two chips while a program is running because it is necessary to RESET the Dragon after switching, but with a bit of programming it is possible to preserve any data stored in the memory as long as it does not occupy the DOS workspace, which is in a different area for each DOS.

"I personally would prefer to switch the Dragon off when switching from one DOS to the other, so I do not recommend that last option. We do have some software under development which will read DeltaDOS programs, while running DragonDOS (or DOSplus). This might prove useful to future *DOSplusDELTA* users, or even DragonDOS users who have friends with DeltaDOS."

"DeltaDOS users see it as the answer to all their prayers, but manage to miss the important bit about not being able to read DeltaDOS discs. *DOSplusDELTA* gives you **DragonDOS** facilities from a DeltaDOS cartridge - effectively it is *DOSplus 4.6* in Delta cartridge format."

Phil Scott is now working on a new DOS which, says Graham, could be called 'DosplusTandy' or perhaps 'CoCoPlus'. This is designed to fit into a DragonDOS cartridge to allow it to be plugged into a Tandy CoCo. This would be useful for people who own both a Dragon and a Tandy, but only own the DragonDOS cartridge.

They would be able to use the disc drive to store their Tandy programs, Programs written on the Dragon could be loaded onto the Tandy, but would only run if they were already Tandy compatible. Basic programs would have to be converted to Tandy tokens, and vice versa for the Dragon.

Enquiries to Orange Software, The Garth, Star Road, Nant-y-Derry, Abergavenny, Gwent NP7 9DP.

Expert's Arcade Arena

Write to 'The Expert' at Dragon User
49 Alexandra Road
Hounslow, Middlesex TW3 4HP

BEFORE you start, let me get one thing straight. I am a goldfish. Any attempt to categorise me as anything other than Dudley the Incredible Gamesplaying Goldfish will be treated with the utmost contempt. How, might you ask, does a goldfish play computer games? That, to you mortals, will be one of the great unanswered questions of life, just like 'What really did happen to Eurohard SA?' and 'Was the Cascade Cassette 50 really written by 50 dyslexic monkeys?'

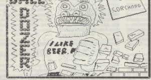
Down to the serious stuff - many of you will of course have read the review of the very wonderful *Mandragore* by John Foster of Kouga Software in the August *Dragon User*. Now, in another Dudley T.I.G.G. bowl-smashing exclusive, I can reveal the latest from Kouga - *Balldozer*. (*This was exclusive to goldfishes at the time of finning. Unfortunately, most goldfish die between the time a computer game is gossiped of and the time the monthly rag hits the streets. - Ed.*) This one is not written by JF himself, but by Stewart Orchard, and it promises to be every bit as good as *Mandragore*. Basically, *Balldozer* is *Break Out* with brass knobs and curly bits.

Gameplay is the same - bounce ball off bat and hit bricks to destory them. But there the similarity ends. The first of the brass knobs is that there will be over 30 screens with different brick patterns, including two hit bricks that must be cracked first, and indestructa-bricks.

But most wonderful of all, power icons drop from the sky, which when collected can give anything from a neat little laser to annihilate bricks, to a bat speed turbo-charger.

And the curly bits: for a start, there will be the Dragon's first ever scrolly message on a loading screen, and also a hi-res graphic loading screen. All this for just £4. Can it really be that good? It's due out in September, so look out for the DU review.

Speaking of reviews, those of you who avidly devour DU's reviews will have noticed a recent influx of high marks. Utopia, Lucifer's Kingdom, Mandragore, all hitting maximum. Could it be, I hear you cry, that DU's reviewers have gone soft? Certainly not. It's just that they don't make'em like they used to, eh, Cascade? This latest rush of genuinely good games is a definite sign that at last the Dragon games industry is back on its feet. The loss of Microdeal, Blaby and Quickbeam was obviously nearly disasterous, but we've proved we can survive without these relative giants. In my opinion, since the departure of the last 'biggies', there has been a general improvement in the standard of software. Programmers can no longer hide behind a shroud of hype and publicity (remember *Fire Force*?), but really have to produce the goods. And without the companies' commission, games prices are coming down at last. All good news for programmers and games players alike. Dragon games are produced more for enjoyment and devotion to our little plastic friend than for big profits, and as a result we are better off, I say.



It's a while since we've seen any good entertainment programs in DU. Personally I don't type many in anyway, because I usually get FC error in 645, or something, and because I have fins. This generally results in me wanting to do something impossible to my Dragon, especially now it's so difficult to get spare parts. But now those days are over, because I, Dudley TIGG, can introduce to you Dragon Shorts. Yes, The Expert will accept any programs that do interesting things, as long as they are no more than 5 lines long. To get you started, here is my magnum opus, my life's work at a keyboard. I'm not going to give it a title, I'm sure one will spring to mind when you run it:

```
10 I$="E"
20 For O = 1 to 5 : O$=STR$(0) : PLAY
"T200LI0O" + O$+I$ : NEXT O
```

For those of you with no keyboard, fingers or brain, or if you just can't face typing in this colossal masterpiece, send me £3 and a blank cassette and I'll send you a copy and sympathy.

Last but not least, hi-scores. Let's hear what you can really do. The best might well see their names in lights (well, black ink, anyway).

One exception: no *Chuckie Egg* scores. If the Editor wants to print *Chuckie Egg* scores, that's her problem.

That's it, then. Send in any hints, tips, shorts and hi=scores. Until then, Dudley is closing this column for the month. Thank you for reading (beeeeeeeeep)

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DR73

Decisions, decisions

***David Rothery** decides to save money by doing a pricey task on the Dragon*

DECISIONS, decisions; modern life seems full of them. They may be extremely complex business decisions, or very simple ones, such as shall I have a pleasant night out with friends, or shall I wallpaper the ceiling?

The computer is good at making decisions, and will look at the information it is given dispassionately, whereas we humans tend to get emotionally involved. Those people who are stupid enough to have thrown away their Dragons and bought a PC will have seen adverts for programs to help in making decisions selling at £40 to £50 a throw which do little more than the following simple, short program. I have deliberately done little by way of screen formatting, and have restricted the number of factors involved in the decisions to one screenful. I don't want to deprive you of the pleasure of tailoring the information to suit your own needs! Likewise, it is simple enough to save the information in a serial file on tape or disc, whichever you have. Just save/load the variables N, M, NA$ and use loops for values of OP$(X) from X=1 to N, FA$(X) and FA(X) from 1 to M and a double loop X=1 to N and Y=1 to M for OP(X,Y). Feel free to do you own modifications and improvements; you will find this more interesting than just typing out the listing, although it will work well exactly as it is.

The easiest way to explain its use is by using a common example such as where to go for next year's holiday. Enter HOLIDAYS when asked what you are deciding between. You are then asked how many holidays you are considering, answer any number up to 14. You then enter each holiday in turn. Let us suppose they are:

1. Stop at home
2. Drive to small town in Italy
3. Fly to Majorca
4. Fly to Australia
5. B & B in Scotland
6. Small hotel in Blackpool

Now you must enter the number of factors affecting you decision, and say what they are. For example:

1. Cost -8
2. Weather +9
3. Travel time -5
4. Crowds -4
5. Entertainment +3
6. Scenery +7
7. Change of customs etc +5
8. Nightlife +2
9. Food +6

The numbers on the right are input after you have entered the names of all the factors, in response to a series of prompts. They represent how important each factor is to you, on a scale of 0-10. 0 means you don't care, and a negative sign means you consider this factor a disadvantage. After each set of inputs you have the opportunity to confirm or alter the information - just pressing Enter is a shorter way of confirming that you wish to go to the next part of the program.

Now you are asked how each of your options rates for each factor in turn. For example, how does each holiday rate for cost, weather, etc? Obviously, for cost, staying at home rates zero, and flying to Australia may merit a 10. Don't use negative numbers, as you have already indicated that cost is a disadvantage. Obviously, Italy and Majorca will rate highly for weather but Blackpool and Majorca may score high on the negative factor of crowds. Enter your own opinions.

After you have confirmed everything, the computer will give a weighted total for each holiday, taking into account all your opinions. These will be displayed either on screen or printed out, in order of merit. You can thus immediately see your best, and worst, options.

The program should be easy to follow. An array FA$(M) is used to store the names of the M factors affecting choice, with thre ratings for each stored in FA(M). Similarly OP$(N) stores the names of the N options and the two dimensional array OP(N,M) stores the ratings of each factor for each option. Since the zero subscripted arrays OP(0,0) etc have not been used, they are used as temporary variables in the calculation and sort. In the calculation, for each option the factors are multiplied by their respective negative or positive weightings and all added together. The sort is a simple bubble sort which is fast enough for such a small number of options.

The program could have many uses, for example in weighing up several possible job offers (nice if you have the choice!) or in deciding a course of action in running a business - or even deciding which TV program to watch. As they say the possibilities are endless. Have fun.

By the way, I didn't take my Dragon up on its suggestion that I simply stay at home!

```
1 'DECISION MAKER BY DAVID ROTHERY JULY 1988
10 CLS:PRINT@64,"           DECISION MAKER"
20 PRINT:PRINT"      BY DAVID ROTHERY (C)"
30 FOR X=1 TO 2000:NEXT
100 CLS:PRINT:INPUT"WHAT ARE YOU MAKING DECISIONS   BETWEEN";NA$
105 IF NA$="" THEN 100
106 IF RIGHT$(NA$,1)<>"S" THEN NA$=NA$+"S"
110 PRINT:PRINT"HOW MANY ";NA$:PRINT"ARE YOU CHOOSING BETWEEN";:INPUT N
120 IF N>14 OR N<1 THEN PRINT"PLEASE ENTER A NO. BETWEEN 1-14":GOTO110
130 CLS:PRINT"CHOOSING BETWEEN ";NA$
140 DIM OP$(N)
145 FOR X=1 TO N
150 PRINT@96,"ENTER NAME OF OPTION ";X:PRINT
155 PRINT:PRINT@138,""
160 INPUT OP$(X)
170 NEXT X
180 CLS:PRINT"YOUR CHOICE IS BETWEEN"
190 FOR X=1 TO N:PRINTX;" ";OP$(X):NEXT
200 GOSUB1000:IF A$="Y" THEN GOSUB2000:GOTO180
215 CLS
220 PRINT:PRINT"HOW MANY FACTORS ARE AFFECTING  YOUR CHOICE OF ";NA$;:INPUT M
230 IF M>14 OR M<1 THEN PRINT"PLEASE ENTER A NO. BETWEEN 1-14":GOTO220
240 CLS:PRINT"FACTORS AFFECTING CHOICE"
250 DIM FA$(M),FA(M),OP(N,M)
```

```
260 FOR X = 1 TO M
270 PRINT@96,"ENTER NAME OF FACTOR ";X:PRINT
280 PRINT:PRINT@138,""
290 INPUT FA$(X)
300 NEXT X
310 CLS:PRINT"FACTORS AFFECTING YOUR CHOICE:"
320 FOR X = 1 TO M:PRINTX;" ";FA$(X):NEXT
330 GOSUB1000:IF A$="Y" THEN GOSUB3000:GOTO310
350 CLS:PRINT"FOR EACH FACTOR GIVE A NUMBER   BETWEEN -10 AND +10 TO RATE ITS IM
PORTANCE. IF IT'S AN ADVANTAGEMAKE IT POSITIVE, A DISADVANTAGEMAKE IT NEGATIVE.
  ZERO MEANS IT DOESN'T MATTER."
360 FOR X=1 TO M
370 PRINT@32*8,"                                ":PRINT@32*8,"FACTOR NO.";X;" ";F
A$(X);" ";:INPUT FA(X)
375 IF FA(X)>10 OR FA(X)<-10 THEN PRINT"OUT OF LIMITS":FOR A=1 TO 1000:NEXT:PRIN
T@32*9,"          ":GOTO370
380 NEXT
390 CLS:PRINT"YOUR RATINGS FOR THE FACTORS ARE";
400 FOR X = 1 TO M:PRINT X;": ";FA$(X);": ";FA(X):NEXT
410 GOSUB1000:IF A$="Y" THEN GOSUB4000:GOTO390
420 CLS:PRINT"NOW GIVE RATINGS 1-10 FOR EACH  OF THE ";NA$
430 FOR X=1TO N
440 FOR Y=1 TO M
450 PRINT@96,"";:PRINT:PRINT:PRINT@96,"RATING OF ";OP$(X);" FOR ";FA$(Y);:INPUT
OPT(X,Y)
460 IF OPT(X,Y)>10 OR OPT(X,Y)<0 THEN PRINT@128,"OUT OF RANGE":FOR A = 1 TO 1000
:NEXT:PRINT@128,"                          ":GOTO450
470 NEXT Y
480 CLS:PRINT"YOUR RATINGS FOR ";OP$(X);":"
490 FOR Y = 1 TO M
500 PRINTY;": ";FA$(Y);" : ";OP(X,Y)
510 NEXT Y
520 GOSUB1000
530 IF A$="Y" THEN GOSUB 5000:GOTO480
540 CLS:NEXT X
545 CLS:PRINT@5*32,"CALCULATING";
550 FOR X = 1 TO N
560 OP(X,0)=0
570 FOR Y=1 TO M
580 OP(X,0)=OP(X,0)+OP(X,Y)*FA(Y)
590 NEXT Y
600 NEXT X
610 FOR Z=1 TO N
620 FOR X=1 TO N-1
630 IFOP(X+1,0)>OP(X,0)THEN OP(0,0)=OP(X,0):OP(X,0)=OP(X+1,0):OP(X+1,0)=OP(0,0):
OP$(0)=OP$(X):OP$(X)=OP$(X+1):OP$(X+1)=OP$(0)
640 PRINT".";
650 NEXT X
660 NEXT Z
661 CLS:INPUT"DO YOU WISH TO LIST RESULT ON   SCREEN OR PRINTER (S/P)";A$:IF A$=
"P" THEN D=2 ELSE IF A$="S" THEN D=0 ELSE 661
662 IF D=2 THEN PRINT:PRINT"MAKE SURE PRINTER IS ON LINE"
665 CLS:PRINT#-D,"FINAL SCORES FOR ";NA$;" :"
670 FORX=1 TO N:PRINT#-D,OP$(X);" : ";OP(X,0):NEXT
680 INPUT"PRINT AGAIN";A$:IF A$="Y"THEN 661 ELSE INPUT"ANOTHER SET OF DECISIONS"
;A$:IF A$="Y"THEN RUN
999 END
1000 PRINT@480,"";:INPUT"DO YOU WISH TO CHANGE (Y/N)";A$:RETURN
2000 INPUT"WHICH OPTION TO CHANGE";X:IF X>N OR X<0THEN 2000
2010 PRINT@480,"                                ";:PRINT@480,"";:INPUT"NEW NAME";
OP$(X)
2020 RETURN
3000 INPUT"WHICH FACTOR TO CHANGE";X:IF X>M OR X<0THEN 3000
3010 INPUT"NEW NAME";FA$(X)
3020 RETURN
4000 INPUT"WHICH RATING TO CHANGE";X:IF X>M OR X<1 THEN 4000
4020 INPUT"NEW VALUE";FA(X):IF FA(X)>10 OR FA(X)<-10 THEN 4020
4030 RETURN
5000 INPUT"WHICH RATING TO CHANGE";Y:IF Y>M OR Y<0 THEN 5000
5010 INPUT"NEW VALUE";OP(X,Y):IF OP(X,Y)<0 OROP(X,Y)>10 THEN 5010
5020 RETURN
```

DRAGONSWORD!

***Paul Grade** takes a monthly stab at setting the world to rights*

AT the time I'm writing this the Weston show is still a 'future event', but by the time you read it the show may be history (*I jolly well hope not, Paul, or Andrew Hill gets his ad fee back, but I take your point - H.*), and either the Dragon and CoCo event of the year or the Flop of 1988. Either way, it's a fair bet that less than 10% of Dragon owners will have attended or done anything at all to help make it a success, so what happened to the other 90%? It has always been the same story at shows, so I don't need a spreadsheet or even a crystal ball (far more reliable) to work out the maximum number of owners attending. This apprent apathy, if that's that's what it is, applies to just about everything on the Dragon scene, whether it happens to be shows, user groups, magazines, software and hardware. Try running a magazine, it doesn't matter whether it is a full scale commercial one or a local group newsletter, and see how many people bother to send you anything useful for publication ... if you're lucky it may be as much as 10% of your subscribers, but usually far less than that. Try writing a program for release and see how many of those people who are constantly whining that 'there's no software for the Dragon' actually buy it. Try designing something cheap and useful in the hardware line, but do it while you're still at school because you'll be signing for your pension before you've sold enough units to cover your costs.

The entire Dragon scene depends on the efforts of about thirty people who are actually prepared to do anything, and a few hundred more who are willing to attend shows, subscribe to magazines, join groups, etc... for all practical purposes the remainder might as well not exist at all, because the only time anyone hears from them is when their machine goes wrong or they decide that they want something provided for them (and when it is they usually don't want it after all!) I know that everyone blames Dragon Data for lousy marketing, and GEC for getting cold feet, but even in the legendary 'good old days' Dragon owners never gave their machine the sort of praise and publicity that, for example, BBC and Spectrum owners did (remember the BBC?), and virtually went around apologising for not having bought a Vic 20 or an Atari 400.

By accident or design they bought what was the best home machine of its time, one that can still give a lot of the current machines a good run for their money six years later, but whereas most of the other machines I've mentioned were almost worshipped by their owners, the Dragon types generally crept quietly away to play *Invaders Revenge*. Of course, the other machines got a lot more media hype, and in the case of the BBC a very suspect 'educational' status on the strength of an even more suspect contract, but so what, that shouldn't have stopped Dragon owners spreading the word, so what's the reason? Are Dragon owenrs really such shy, retiring types? Is it that they don't want to make everyone else jealous, or is it that a lot of them are just too damned lazy to do anything but maon, even when it would be in their own interest? When the Dragon finally dies, it won't be the fault of Dragon Data, or even because the Dragon has been out-classed.

Yes, I know I'm always having goes at you, and if you are one of those who attend all the shows you can, subscribe to *Dragon User* instead of borrowing someone else's copy, write articles for DU or your Group newsletter, and occasionally send in useful listings of programs that you've written, or even try to market them, then I hope you will accept my (*Paul, the computer's inserted a row of garbage here. What were you thinking?*) most profound apologies.

OK, end of lecture. Either you get the message and do something about it, or you don't. Let's change the subject anyway. Depending on the result of the Weston show, there's a distinct possibility that NDUG may run a London & South East Dragon and CoCo type show sometime around March/April 1989. If there's enough interest demonstrated at Weston I think we can do so without making a loss, even taking into account the cost of suitable premises in this part of the country. Of course, if Weston flops, then there isn't much point, is there, after all, what retailer in his right mind is going to throw good money after bad? At the moment all the signs point to Weston being a success, in which case you can take it as being definite that there will be a London area show next year. The Dragon 'user-base' is decreasing now as more people switch to other machines (regardless of whether they need them or not!), and at the current rate of decline I very much doubt tht by 1990 it will be possible to run a Dragon show at any location and still break even, so next year may well see the last of the Dragon/CoCo specific shows, in which case let's make sure that they are good ones! If the Dragon is going to finally become commercially 'dead' let's give it a wake to remember!

Of course, that won't mean that the Dragon itself will be any less useful than it is now, it just means that Dragon owners will have to work a bit harder to keep things interesting. No-one can make a living out of selling Dragon/CoCo material exclusively, if the quality of the software is good enough, and enough people are buying it, they can still afford to market it for us, even if most of their profit has to come from other micros. Really it is up to you (yes, YOU) to keep things going both by writing material and by buying it, and the fewer Dragon owners there are, the more necessary it becomes for those that remain to really put something into keeping the old beast alive. Of course, there's always the other big problem, how are the distributors to sell the software you've written for them, and how are you to know what software is available for you to buy? Simple, it's just a matter of advertising, but if you were a distributor trying to sell Dragon programs, where would you advertise. Advertising in the 'mainstream' computer publications costs a medium sized fortune, and it's unlikely that you'd sell enough material to cover the cost, so that leaves the Dragon specific publications like *Dragon User* and *Update*. Yes, I know there are others, but I think that their publishers would be the first to admit that they simply don't have enough circulation figures to make an appreciable difference to sales. *Dragon User* needs commercial advertising to stay in business, because typesetting, printing and distributing a commercial magazine is an expensive business, and subscription charges just don't provide enough income to cover expenses, but for a distributor to advertise in D. User he has to be reasonably sure that the ad will sell enough material to cover its cost, which again means that if you aren't buying now there won't be any programs advertised later! *Update* doesn't depend on advertising revenue to cover running costs because overheads are much lower and we can just about manage on what we get in subscriptions, but our circulation is lower than that of D. User, so although *Update* ads cost less they aren't as useful to a potential advertiser, so effectively it all comes back to you again ... the more subscribers there are to *Dragon User*, and the more members there are in the NDUG, the better the potential market for advertisers, which means they can sell more material, and you get the benefit of having more on offer, and of course if you are writing software (you are, aren't you?), you get more cash too! It is all very simple when you stop to think about, the more you are willing to put into Dragon ownership, the more you will get out of it, and everyone benefits. Sit around waiting for someone else to do everything and the whole thing simply dies leaving you with no support for your machine at all, so not buying, and not subscribing is really a false economy.

Sorry it's all been a bit serious this month, but to be honest the Dragon scene has been rather depressing, and if someone out there doesn't wake up to the fact that they need to do something about it, things aren't going to improve. Hopefully there will be something a little more cheerful to say by the time I type up the next lot.

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Crossword

Please get your answers in to *Dragon User Crossword Department* by the end of the month on the front cover

The thirteenth and last Dragon Crossword pulls on its long red bobble hat, tightens up its broad black belt and gives a final spit to its patent wellies.

"Ho ho ho", it rumbles, "What have I got in my sack?" Out pops the eleventh Dragon crossword. "The sack!" It japes, of course. No sack but a metamorphosis we seem. From next month, the Dragon Crossword becomes the Dragon Wordsearch! (We ran out of software.) But what else is in that sack? It looks to me like Ian Minshull of Swansea, who would like *Indoor Football* or *Total Eclipse* and Brian Thomas of Old Tupton, who wants to know what happened to the tape he won in the eighth?

The phrase is CARTRIDGEPORT.

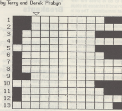
WE ALSO HAVE Gordon Wright of Dunblaine and Paul Harrison of Broseley for the Tenth Crossword. You're all getting too good!

1 You must be mad to pull these (8)
2. Prickler and Climber join in the song (5,3,3)
3. Reps sent unusual gifts (8)
4. Can they be heard on a one-horse open sleigh? (6,5)
5. Use it to steal a Christmas kiss (9)
6. Mares rest making decorations (9)
7. After dinner, burn it and eat it! (4,7)
8. Give 'em the money before they serenade you again!
9. Jumble can last us a year until he comes again.
10. Let the helm be under the North Star. (9)
11. Cockney 'eyes' to eat at Christmas? (5,4)
12. Hose for your presents? (4,8)
13. Rudolf's coming - sounds like you should kill the chimes? (6,5)

DRAGON QUIZ
hic!

by Terry and Derek Probyn

No software titles this month. Instead all the answers have a festive flavour!



Dragonsoft

New software for review should be sent to *Dragon User*,
49 Alexandra Road, Hounslow, Middlesex TW3 4HP

Jolly good barrels

Program: *North Sea Action*
Supplier: Orange Software, The Garth, Star Road, Nant-y-Derry, Abergavenny, Gwent NP7 9DP
Price: £2.00 cassette or disc

THIS game was written by a Norwegian, Geir Hovland, who also wrote the music, 'For he's a jolly good fellow', no less, and this has proved to be a very difficult game to play. Originally described to me as a Pacman-type game, the screen dump on the advertising sheet makes it look like that. As soon as you start playing it, however, you will realise how different it is. Played with a joystick - a switched type is best although control is still very difficult to begin with - you start at the top of the screen and move a pipline through a maze of tunnels to collect as much oil as possible by passing over dots, and collecting barrels which give you even more points, 25 for an oil spot and 200 for a barrel.

As you move a solid line is left behind you representing the pipeline and you must take care that none of the marauding oil-monsters, which move in both directions along some of the horizontal passageways, touch any part of this line. If they do the message 'Oops. We gotcha' appears, which makes me think this writer liked *Megabug*. To withdraw the pipeline all you need to do is press the fire-button and it retraces its steps almost immediately. The oil in the upper part of the screen is very easy to reach but it becomes increasingly harder the lower down the screen you need to travel to as you have to still watch out for the monsters at the top as well as those at the bottom. If one is moving along one of the passageways you are told that there will not be another immediately behind it but you still have to be careful in case one comes in from the other end. Only four lives are given to you and you virtually have to surrender at least one of these to clear the very bottom of the screen. It took me many hours of play before I was able to complete the first screen and I was then faced with the message 'Well done. Now continue with a harder level.'

After this it took many sessions at this game before I could get any further but I have now been able to get as far as the fourth screen, and although they are all different they do not appear to get greatly harder. This game is addictive, however, and no doubt I will spend many more hours trying to get even further and try many different tactics to beat those monsters. Luckily there is no time limit so you can hide away by your little oil rig for as long as you like, though this tends to annoy the rest of the family who are queueing up to have a go. You get an extra life for every 10,000 points but I have only achieved this on a couple of occasions and, as yet, I have not been able to manufacture extra lives or move on to the other screens by dubious means. All in all a well put together game, although the graphics are not outstanding, especially the monsters, but at that price it is well worth it. I especially liked the yoyo type symbols to show you how many lives remain.

Mike Stott

Breakthrough for the Breakouts

Program: *Ball Dozer*
Supplier: Kouga Software, 94 The Oval, Firth Park, Sheffield, S5 6SP
Price: £4 on tape. Also available on disk from Orange Software.

WHEN I first received this game I thought that it was going to be just like all the other versions of *Breakout* that I have and prepared myself for a long session with a game I do not like. The version I received was on tape but loaded surprisingly quickly. Having loaded it I found that there was no joystick option and I do not normally like keyboard games. This game surprised me on all counts. It is *not* like any other *Breakout* game and is very easy to operate using the keyboard.

When you play the first screen you are faced with a wall of 6 rows of fifteen bricks in each row. The front five rows are normal bricks which disappear when you hit them but the back row only cracks when they are first hit and have to be struck again before they are destroyed. When half the bricks are hit the ball speeds up and it would then be virtually impossible were it not for extra help you can obtain from balls which drop down from the wall as you hit some of the bricks. These take the form of extra lives, power shots (enabling you to fire right through the wall), lasers, down-arrows (slowing the ball down), up-arrows (opening a door for you to pass through to the next screen), ! (speed up the bat if shift is pressed) and my favourite which enables you to catch the ball. Some of these only last for a few seconds but others continue until you lose a life by missing the ball. You are allowed two of these at one time but some combinations are not possible, such as catching a ball and firing a laser.

> *''Only four lives are given, and you have to surrender at least one to clear the bottom of the screen.''*

Sometimes it is very difficult to catch these extras while still trying to destroy the wall and at other times you do not want to collect them but cannot avoid them. Points are awarded for these extras and also for hitting the bricks. When you have removed all the bricks you move on to another 29 similar screens although they are all designed differently and have the double bricks in different places. There are also solid walls on some screens which remain when hit and a variety of techniques are needed for each set of bricks. Should you manage to complete these screens without losing your ten lives you are then presented with a - no I won't tell you I'll let you find out for yourself. Suffice it to say that most people who have seen this game say this is the best screen. I have played every screen and they can all be cleared of bricks although some do look very difficult at first glance. Up to now I have only managed to reach the eighth screen when I have started at the beginning and cannot see myself getting much further but would love to hear from anyone who reaches the final screen without cheating. The game is not without faults as I have had the ball

Flying backwards and forwards across the top of the screen and had to turn off the game and restart it. This also occurs up and down at the side but can be stopped by hitting the ball with the bat in varying ways. I am not happy with the detection routine of the ball hitting the bat as I feel sure on many occasions that the ball passes though the ball (maybe it is my eyes playing tricks, but I do not think so). Finally on several screens the ball passes through solid walls, although this may be an intentional part of the program put in by the author. Incidentally this is the first all machine code program written by Stewart Orchard and i certainly look forward to many more programs from him. I have become more than slightly addicted to this game and have enjoyed playing it despite having to load from cassette and the aforementioned complaints. I do not hesitate to award this program 4 Dragons and would certainly recommend it as a good buy even if you do not normally like *Breakout* games.

Mike Stott

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Flex bounces back from Orange

Program: *Orange FLEX 1*
Supplier: Orange Software, The Garth, Star Road, Nant-y-Derry, Abergavenny, Gwent NP7 9D.
Price: £5.00

IT is rare these days to have software released for the DragonFLEX system and I was intrigued by this disc. Orange Software have once again produced excellent value for money in that this is a compilation of two discs formerly from Microvision, *Q Mon* and *Flex Pack-1* which originally retailed at three times the price.

So what do you get for your fiver? A great deal. The Flex Pack Utilities are I believe written by Roy Coates who has already produced excellent articles on Flex (see Flex Revisited, September 1985 and Dragon Plus Expansion, January 1986), and full instructions come on the disc. The instructions for each utility program are held in the files with the extension INS. Their files are in 'QTP' format and may be viewed on screen or sent to the printer if a hard copy is required. The first utility is a program called FONT, and is a small utilikty which enables the user to select different printer modes without the usual fuss of sending control codes to the printer. The utility lies in the default utility command space within the Flex Operating System and when called with a simple keyboard command displays a menu of available printer modes which may be selected by entering the number displayed against the desired option. The program is written for the Epson range of printers and pressing the T key)TEST) will cause two lines of the alphabet to be sent to the printer so that the effect of the various options may be seen. These options are:

1) Return to Default Mode
2) Alternative character font
3) Condensed Mode
4) Elite Characters
5) Emphasised Characters
6) Pica Characters
7) Double Strike Mode
8) Enlarged Mode
9) Return to Flex

The second utility is a DIARY routine which allows the user to create a text file containing entries in the usual manner. When this program is called the file will be scanned and any lines found to contain the current date will be displayed at the terminal. If the Diary command is inserted into the FLEX start-up file then the diary checking becomes automatic on power-up. The comprehensive instructions detail two methods of invoking the diary routine and how new information may be input and redundant information detected if required.

The next utility is a HELP facility which has been designated to allow access to information stored within a helpfile by simply typing the heading that the required detail is associated with. The facility comprises two files, the first being the help program itself and the second being the text file containing the desired information. The information is stored in the HELP file as a heading followed immediately by the information itself which may consist of any number of lines.

There are two methods of invoking the HELP routine, to either call for the information under one heading, or to display a list of all headings found. I found this little feature particularly helpful in storing the detail of all those small 'cheat' instructions and other commands that one either writes in a book or on bits of paper which are then promptly lost.

The fourth utility on the disc comprises two small programs for screen dumps for Epsom compatible printers. They perform either a single or double sized screen dump respectively and are only suitable for graphics modes PMODE 3 and PMODE 4. Also contained within both alternatives is an X routine. This turned out to be rather dull in that it is a replacement for the TSC utility XOUT, which will delete all files having a common specified extension unless they have been given a file protection such as PROT.

The fifth item on the disc is a 'phone' utility which is of specific use to operators who use their systems daily. The program will search each line of the directory file for any occurrence of a string entered by the user and will then display any lines containing the word required by the user. The program is easily adapted to form a simple data retrieval package.

The sixth utility is hardly a utility at all and is called COOKIE, and indeed turned out to be a 'fortune cookie' which gave a whole series of useless lines and sayings which one would find in the edible variety or on a daily calendar. I personally find little use for this routine, but perhaps it could be coupled to the DIARY used earlier. The one thing it does do is to add a little light relief when reviewing the disc.

Utility seven turned out to be a Quick Text Processor (QTP) which is a simple text processor program allowing the most common forms of text format to be achieved rapidly and easily. An ordinary text file created using a standard text editor can be processed without modification using the default values with 'QTP' or alternatively by inverting the relevant 'QTP' commands into the source file. The utility reads the source file from disc and not from memory, therefore there is no limit upon the size of the file to be processed. The instructions contained on the disc are clear, comprehensive and effective: underlining, line spacing, width and margin settings are all available and there is even a Verbatim option which allows portions of the text to be printed without being affected by the text processor (ideal for tables, etc). This processor is ideal and the simple commands also contain options for new lines, and centering given text, or uses given text as a page header (the latter option is only available when page numbering is enabled).

The eighth item on the disk is QMON itself which is a small machine code monitor type program which allows memory locations to be examined or altered, both Ascii and hex dumps of memory are catered for and the instructions are short, simple and to the point.

The final two facilities on the disk are TERM and PROMPT. TERM allows the use of an RS 232 terminal connected to the DRAGON 64 through the RS232 port. The facility enables you to input a desired baud-rate, and also displays a list of 14 baud-rates from 50 to 9600 if the baud-rate is omitted. PROMPT allows the changing of the standard FLEX prompt '+ + +' to any user defined string of up to three characters. This is useful for marking special system discs that have been configured for a particular application. The routine also changes the FLEX '???' prompt to match the new user prompt.

To sum up this disk, there are ten utilities of varying quality and usefulness, and clearly designed for FLEX users who must be serious about their Dragons to have FLEX at all, and I must say at 50p per item it is well worth the expense to add these utilities to those already available under FLEX DOS. As one would expect from Roy Coates the instructions are lucid, the programs run smoothly and his descriptions of the routines difficult to better. If you are running FLEX then an investment of £5 plus 50p for postage and packing is one of the best you will make this year. (I would reiterate: please do not forget the 50p as clearly Orange Software are charging very modestly for the disc and that 50p does make a difference to their profit margins.)

R L N Hewson

🐉🐉🐉🐉🐉

Genie in a bottle

Product: Alladink ribbon re-inking
Price: *See last month's Newsdesk*
Supplier: *Alladink, 4, Hurket Crescent, Eyemouth, Berwickshire TD14 5AP.*

I sent one ribbon from my Tan-

Dragonsoft

New software for review should be sent to *Dragon User*, 49 Alexandra Road, Hounslow, Middlesex TW3 4HP

dy DMP 105 for re-inking earlier this year. It was returned to me about three weeks later, but I did not use it until the ribbon in current use needed replacement, a month or two later. The ribbon had plenty of ink, and it was necessary to put the printer on Auto for a few moments to clear the excess. Except for one or two fainter parts, where the re-inking appeared to be incomplete, the results were reasonably satisfactory.

HOWEVER, one day the printer hung up halfway across the page. Taking it off line and switching it off and on again appeared to remedy matters, but no ... it happened again, and again. I suspected that the head had become glued up with surplus ink, but in fact the defect was caused by the very worn ribbon. The printer pins were penetrating the ribbon. Taking the head off line and carefully removing the re-inked ribbon, I inserted a brand new one, and had no further trouble. Alas, a friend of mine who had the same problem managed to break one of the pins while trying to remove the head from the ribbon. A new head will cost him more than thirty pounds. So, while Alladink do a satisfactory job, my conclusion is that using a re-inked ribbon is false economy.

R A Davis

Not recommended by reviewer

PIN penetration can happen with any worn fabric ribbon, but some permanent inks cause fabrics to rot faster, making the problem worse.

Supposed to shift your space

Program: *Discup* (utility)
Price: £2.46 inc p&p
Supplier: Pulser Software, 36 Foxhill, High Crompton, Shaw, Oldham OL2 7NQ

ONE of the problems encountered when changing from a tape based system to disc storage, is that tape based programs that use the first page of graphics memory will no longer run. This is because, with the exception of DeltaDos, the disc controller takes that area over to use as work space. Of course the controller could always be unplugged when you want to use such programs. However, this constant disturbing of the connectors would do the contaacts no good at all. A better idea is to effectively detach the Dos using a software switch (as was published in DU many moons ago). Better still would be to shift the disc workspace to a position whjere it is unlikely to get in the way, and this is precisely what Pulser Software set out to do with *Discup*. With *Discup* installed the workspace starts somewhere above 32000. This means that not only will programs that need the first page run but the disc is still useable. In fact Pulser claim that using *Discup*, 'nearly all graphic programs will run'. It was this claim I decided to put to the test first. Imagine being able to play *Jet Set Willy* without having to remove the controller, it seemed to good to be true. Unfortunately such was indeed the case. All four of the programs I chose for my test (*Manic Miner, Jet Set Willy, Fire Force* and *Superkid*) either failed to load with *Discup* installed or loaded then crashed when run. However, my biggest disappointment came when Paul Wicks' *Mode 24* semigraphics, published in DU October 86, also crashed.

In short it would be fair to say that if Brian Cadge's *Disc Detach* program didn't help, then *Discup* will not either. Two sources of irritation were that first it was necessary to load the program then wait for the disc motor to stop before typing exec. Failure to do this meant that the disc ran continuously. Secondly the system obviously interfered with the error routine, as every error was reported as an NF Error, no matter what the cause. The first of these is easily overcome using a short Basic program feature a delay via the TIMER command. Indeed so simple is it that I can't understand why it was not included on the disc. After all RUN 'DISCUP' looks a lot more professional than the method used. The second problem is a good deal more serious; all you will really know is that an error has occurred. As to what sort of error, it will be guesswork.

Where this system does score is that when a program does run, the disc can still be used. This means that unprotected programs, ie those printed in DU which poke the graphics pages to achieve their display, can now be stored on disc without alteration. If you have a lot of this type of software then *Discup* would be a worthwhile investment. The price means that you have not got much to lose. *Discup* runs only on the Dragon 64 (or upgraded 32) and is available for DragonDos or SuperDos E6.

Ken G. Smith

Good for an old 'un

Program: *Bust Out*
Supplier: Dragonfire Services, 13 Parry Jones Close, Blaina, Gwent
Price: £3.00 + 50p p&p

OVER the past few months there have been a few good, new and fairly original games released for our computer. Here we have *Bust Out*, which as the title gives away is another clone of the costly arcade favourite *Break Out*. With games like *Lucifers Kingdom* around, surely *Break Out* clones be sent off to collect their old age pension?

Just for those of you who have never seen a version of Break Out - there might be somebody out there - here's a brief synopsis. You play a bat, a simple amoeba like structure which moves crab fashion right and left along the bottom of the screen. You have but one objective in life and that is to align yourself underneath a bouncing ball. If you do this correctly the ball will fly back up the screen and crash into a hefty wall of bricks knocking one or several out. You must rid the screen of these assorted coloured bricks before losing your allotted balls.

Well that's the outline of the game but what about extras for the 1988 version. Graphics - well you can hardly expect them to be of precision detail, a bat, a ball and a brick wall doesn't exactly need intricate hi-res graphics. *Bust Out* looks as good as it probably could do with multi coloured layers of bricks.

Dragonfire have done fairly well to add extra features where they have had a chance. Firstly you don't press the start button to see the ball start whizzing around, there are 9 speed levels to choose from - with so many to pick from there must be one to suit your level. If though even slow is too fast you can increase the size of the bat with a choice that ranges from the quite hefty to minute where the ball is only slightly smaller than the bat!

Not only can you change your weaponry but you can alter the brick size so that you can either slowly chip away or hack out great wedges. Other little extras include the option of 1 or 2 players, joystick control, steerable ball and extra lives.

Also there is even a burst of music when each thousand points have been clocked up which is quite pleasant. Movement is smooth, fast and to my knowledge bug free which adds up to an addictive game.

Instructions are comprehensive, printed on three sides of A4. One small yet important factor of the instructions are that it tells you out of the levels which is slowest. Although you realise this after one game, when I've loaded up I've often forgotten and have played so many games where no indication is given. Despite being well explained I still don't really like instructions that don't come in the cassette box because they stand a better chance of getting lost.

There's just one irritation in the game when the ball gets stuck behind the back of the wall for what seems like an eon while you wait patiently. I've actually only ever played one other version of *Break Out* on the Dragon but *Bust Out* is by far the better. As a version of such an old game it does everything that can be expected. As for the rating I feel that all it can be given is 3 due to its aged look. Despite this it is still well produced and excellent value.

Philip Stott

Siege!

Richard Boryna assaults walls with a mangonel

THIS is a relatively simple, addictive program that involves controlling a giant medieval capapult, the mangonel. Your job is to bombard a walled vilage. By altering various values it is possible to alter the flight path of the rock hurled, hopefully to land it on top of some poor, unsuspecting villager's hut.

When the program is first run, you will be asekd if your Dragon can cope with the infamous POKE65495,0 Don't worry if it can't the program isn't that slow! There will then be a pause as the help page is drawn.

On the main playing screen you are given information about the mangonel: current release angle, arm elngth, number of ratchet turns and rock weight. Also shown are the previous length and height plus a pictuyre of the mangonel (allowing for artistic licence!). You can alter these values by entering:

RA to alter release angle (between 15-80 degrees)
AL to alter the arm length (between 2 to 5 metres)
RT to alter the number of ratchet turns (between 2 to 5 turns)
RW — to alter the weight of the rock (between 20 to 100 kilos)

When you enter any of the above after the COMMAND ... prompt, you are then asked to input a new value. Please stay within the given parameters or the computer will simply bleep at you. After entering a value, the display is updated (watch the mangonel arm after changing the arm length!).

There are also three other commands:

F fire the rock
H help!
Q quit

All inputs should be followed by ENTER, and if at any time you make a typing error, backspace works as usual and all in hi-res!

I actually found a version of this program while wandering around a network Link 480Z Research Machines. I decided that I would write a similar program for the Dragon, a fairly easy task (I thought), seeing how archaic the 480Z is. But it does have one advantage over the Dragon: text in hi-res (yes, that one again). This was in fact quite easy to overcome I simply used DRAW strings to make my own 'user-defined' graphics. The parts of the program concerned with this go from lines 1580-1730 and 2030-2530. There is no reason why this routine could not be modified and used by somebody else.

If you can't face typing in this fairly lengthy program (and who can blame you?) then send £2 to me at 71 Oakley Drive, Wellingborough, Northants NN8 3JY, and I'll send you a couple of copies on tape (UK only).

```
10 ' **************
20 ' **************
30 ' *** SIEGE! ***
40 ' ** R.BORYNA **
50 ' **************
60 ' **************
70 '
80 ' ******************
90 ' *** INITIALISE ***
100 '*******************
110 PCLEAR8
120 DIMCH$(38)
130 GOSUB150
140 GOTO640
150 SF=0:H=1
```

```
160 RA=45:RW=40:RT=3
170 AL=3:PL=0:PH=0
180 FF=0
190 ' ***RANDOMIZE***
200 FORI=1TO10
210 X=RND(-TIMER)
220 NEXT
230 ' ***TITLE SCREEN***
240 CLS0
250 FORY=32 TO 160 STEP32
260 FORX=4 TO 26
270 READA
280 IFA=0 THEN NEXTX,Y:GOTO310
290 PRINT@X+Y,CHR$(191);
300 NEXTX,Y
```

```
310 PRINT@264,"richard";CHR$(128)+CHR$(128);"boryna";
320 PRINT@458,"please";CHR$(128);"wait";
330 SCREEN0,1
340 ' ***TITLE DATA***
350 DATA1,1,1,1,0,1,0,1,1,1,1,0,1,1,1,1,0,1,1,1,1,0,1
360 DATA1,0,0,0,0,1,0,1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1
370 DATA1,1,1,1,0,1,0,1,1,0,0,0,1,0,1,1,0,1,1,0,0,0,1
380 DATA0,0,0,1,0,1,0,1,0,0,0,0,1,0,0,1,0,1,0,0,0,0,0
390 DATA1,1,1,1,0,1,0,1,1,1,1,0,1,1,1,1,0,1,1,1,1,0,1
400 GOSUB2280
410 ' ***DRAW HELP PAGE***
420 PMODE4,5:PCLS
430 A$="@THIS@PROGRAM@SIMULATES@THE@ACTION@OF@A@MEDIEVAL":
DRAW"BM4,12;":GOSUB1860
440 A$="SIEGE@ENGINE...@THE@MANGONEL.":DRAW"BM4,20;":
GOSUB1860
450 A$="@THE@PROGRAM@WILL@LET@YOU@CHANGE@@SEVERAL@OF@THE":
DRAW"BM4,30;":GOSUB1860
460 A$="MAJOR@VARIABLES@AFFECTING@THE@TRAJECTORY@@OF@THE":
DRAW"BM4,38;":GOSUB1860
470 A$="ROCK@THAT@IT@FIRES...":DRAW"BM4,46;":GOSUB1860
```

```
480 A$="AL...MANGONEL@ARM@LENGTH":DRAW"BM20,60;":GOSUB1860
490 A$="RT...NUMBER@OF@RATCHET@TURNS":DRAW"BM20,68;":
GOSUB1860
500 A$="RW...WEIGHT@OF@ROCK":DRAW"BM20,76;":GOSUB1860
510 A$="RA...RELEASE@ANGLE":DRAW"BM20,84":GOSUB1860
520 A$="@THE@VARIABLES@CAN@BE@CALLED@UP@AND@ALTERED@WHEN":
DRAW"BM4,100;":GOSUB1860
530 A$="THE@PROGRAM@GIVES@THE@COMMAND@PROMPT.":DRAW"
BM4,108;":GOSUB1860
540 A$="@OTHER@OPTIONS@ARE@AS@FOLLOWS...":DRAW"BM4,118;":
GOSUB1860
550 A$="F....FIRE...@HURL@THE@ROCK":DRAW"BM20,130;":
GOSUB1860
560 A$="H....HELP":DRAW"BM20,138;":GOSUB1860
570 A$="Q....QUIT":DRAW"BM20,146;":GOSUB1860
580 A$="PRESS@ANY@KEY@TO@CONTINUE":DRAW"BM58,190;":
GOSUB1860
590 SCREEN1,0
600 IF INKEY$="" THEN600 ELSE RETURN
610 ' **********************
620 ' ** DRAW MAIN SCREEN **
630 ' **********************
640 PMODE4,1:PCLS:SCREEN1,0
650 LINE(112,52)-(256,0),PSET,B
660 LINE(0,52)-(256,52),PSET
670 LINE(0,20)-(112,0),PSET,B
680 GOSUB1040
690 A$="...CURRENT@VALUES...":DRAW"BM114,8;":GOSUB1860
700 A$="RELEASE@ANGLE..@@@@DEGREES":DRAW"BM114,20;":
GOSUB1860
710 A$="RATCHET@TURNS..@@@@TURNS":DRAW"BM114,28;":GOSUB1860
720 A$="ARM@LENGTH.....@@@@METRES":DRAW"BM114,36;":
GOSUB1860
730 A$="ROCK@WEIGHT....@@@@KILOGRAMS":DRAW"BM114,44;":
GOSUB1860
740 A$="PREVIOUS@LEN..@@@@M":DRAW"BM0,9;":GOSUB1860
750 A$="PREVIOUS@HGT..@@@@M":DRAW"BM0,17;":GOSUB1860
760 A$="M":DRAW"BM10,192;":GOSUB1860
770 ' ***DRAW 'SCALE'***
780 LINE(3,182)-(253,182),PSET
790 FORX=4TO316 STEP8
800 LINE(X*0.8,184)-(X*0.8,182),PSET
810 IF(X-4)/40=INT((X-4)/40)THENA$=STR$(X-4):XX=INT
((X-LEN(A$)*7)*0.8):DRAW"BM"+STR$(XX)+",191;":GOSUB1770:
LINE(X*0.8,184)-(X*0.8,192),PSET:NEXTELSENEXT
820 LINE(243,192)-(243,182),PSET
830 A$="300":DRAW"BM236,191;":GOSUB1770
840 GOSUB1330
850 F=0
860 GOSUB1550
870 GOSUB1960
880 ' ********************
890 ' **RESPOND TO INPUT**
900 ' ********************
910 IFAA$="H" THEN GOSUB2140:GOTO850
920 IFAA$="AL" OR AA$="RW" OR AA$="RT" OR AA$="RA" THEN
GOSUB1430:GOTO850
930 IFAA$="Q" THEN GOSUB1710:GOTO640
940 IFAA$="F" THEN LINE(0,53)-(128,62),PRESET,BF:GOSUB1120:
GOTO850
950 ' ***ILLEGAL INPUT***
960 LINE(0,53)-(128,62),PRESET,BF
```

```
970 A$="COMMAND@NOT@RECOGNISED":SOUND1,5:DRAW"BM0,62;":
GOSUB1860
980 FORI=1TO1000
990 NEXTI
1000 F=0
1010 GOSUB1960
1020 GOTO910
1030 ' ***DRAW CATAPULT***
1040 LINE(59,46)-(26,32),PSET:LINE(24,46)-(61,42),PSET,BF
1050 A$="O":XL=INT((32+((5-AL)*6))*0.8):YL=(192-
(160-((5-AL)*2)))
1060 DRAW"BM"+STR$(XL)+","+STR$(YL)+";":GOSUB1790
1070 LINE(51,44)-(53,26),PSET,BF
1080 RETURN
1090 ' **********************
1100 ' ** DRAW FLIGHT PATH **
1110 ' **********************
1120 RD=3.142/180:SA=SIN(RD*RA):CA=(COS(RD*RA))^2:S2=
SIN(RD*RA*2):T=0:TA=TAN(RD*RA):SS=(SIN(RD*RA))^2
1130 AF=25*75/(3*AL^2):U=SQR(28000*RT/(RW+AF))
1140 RG=INT(U^2*S2/10):RF=LOG(RG)/4:X=4:Y=1
1150 IFRA<20 THEN X=6
1160 ST=LOG(Y)*2/TA:X=X+ST
1170 Y=X*TA-(10*X^2/(2*U^2*CA))
1180 PSET(X*0.8,192-(Y*0.85+10))
1190 PLAY"T255;O1;G-"
1200 ' ***CHECK FOR HIT***
1210 IFPPOINT(X*0.8,193-(Y*0.85+10))=0 THEN1160
1220 ' ***HUTS...***
1230 IFPPOINT(X*0.8,193-(Y*0.85+10)) AND X*0.8>=
HH AND X*0.8<=HH+30 AND 193-(Y*0.85+10)>172  AND
193-(Y*0.85+10)<182 THEN GOSUB2180
1240 ' ***...OR WALL?***
1250 IFPPOINT(X*0.8,193-(Y*0.85+10)) AND X*0.8=>PX*0.8-1
AND X*0.8<=PX*0.8+9 THEN FORI=1TO15:PLAY"T255O2G":NEXT:
GOTO1310
1260 IFX>(RG-RF)OR (Y<=8 AND X>RG/2) THEN 1300 ELSE1160
1270 PL=INT(X+ST)-4:PH=INT(U^2*SS/22)
1280 IFX<(RG/2) THEN PH=INT(Y)
1290 GOTO1310
1300 PL=RG-4:PH=INT(U^2*SS/22)
1310 RETURN
1320 ' ***DRAW VILLAGE***
1330 HP=50+RND(20):PX=120+RND(108)
1340 LINE(PX*0.8,180)-((PX*0.8)+7,192-HP),PSET,BF
1350 HP=PX+20+RND(40)
1360 HH=INT(HP*0.8)
1370 FORI=0TO1
1380 H1=INT((HP+I*20)*0.8)
1390 DRAW"BM"+STR$(H1)+",180;"+HT$
1400 NEXTI
1410 RETURN
1420 ' ***CHANGE VALUES***
1430 IFAA$="RA"THENT=1:LINE(0,53)-(180,62),PRESET,BF:A$=
"NEW@ANGLE@@":DRAW"BM0,62;":GOSUB1860
1440 IFAA$="AL"THENT=2:LINE(XL+6,YL)-(XL+2,YL-6),PRESET,
BF:LINE(0,53)-(180,62),PRESET,BF:A$="NEW@LENGTH@":DRAW
"BM0,62;":GOSUB1860
1450 IFAA$="RT"THENT=3:LINE(0,53)-(180,62),PRESET,BF:A$=
"NEW@NUMBER@":DRAW"BM0,62;":GOSUB1860
1460 IFAA$="RW"THENT=4:LINE(0,53)-(180,62),PRESET,BF:A$=
"NEW@WEIGHT@":DRAW"BMO,62;":GOSUB1860
1470 AA$="":F=1:GOSUB1990
1480 ' ***CHECK VALUES***
1490 IFT=1 AND (VAL(AA$)<15 OR VAL(AA$)>80) THENSOUND1,10:
AA$="RA":GOTO1430 ELSE IFT=1 THENRA=VAL(AA$)
1500 IFT=2AND(VAL(AA$)<2 OR VAL(AA$)>5) THENSOUND1,10:AA$=
"AL":GOTO1440 ELSE IFT=2 THENAL=VAL(AA$)
1510 IFT=3AND(VAL(AA$)<2 OR VAL(AA$)>5) THENSOUND1,10:AA$=
"RT":GOTO1450 ELSE IFT=3 THENRT=VAL(AA$)
1520 IFT=4AND(VAL(AA$)<20 OR VAL(AA$)>100) THENSOUND1,10:
AA$="RW":GOTO1460 ELSE IFT=4 THENRW=VAL(AA$)
1530 RETURN
1540 ' ***WIPE OLD VALUES***
1550 LINE(189,13)-(207,44),PRESET,BF
1560 LINE(70,17)-(89,3),PRESET,BF
1570 ' ***DRAW NEW VALUES***
1580 RA$=STR$(RA):LL=LEN(RA$):A$=RIGHT$(RA$,LL-1):DRAW
"BM195,20;":GOSUB1770
1590 RT$=STR$(RT):LL=LEN(RT$):A$=RIGHT$(RT$,LL-1):DRAW
"BM201,28;":GOSUB1770
1600 AL$=STR$(AL):LL=LEN(AL$):A$=RIGHT$(AL$,LL-1):DRAW
"BM201,36;":GOSUB1770
1610 RW$=STR$(RW):LL=LEN(RW$):A$=RIGHT$(RW$,LL-1):DRAW
"BM189,44;":GOSUB1770
1620 PL$=STR$(PL):LL=LEN(PL$):A$=RIGHT$(PL$,LL-1):DRAW
"BM70,9;":GOSUB1770
1630 PH$=STR$(PH):LL=LEN(PL$):A$=RIGHT$(PH$,LL-1):DRAW
"BM70,17;":GOSUB1770
1640 ' ***RE-SIT ROCK***
1650 XL=INT((32+((5-AL)*6))*0.8):YL=INT(192-(160-((5-AL)
*2)))
1660 A$="0":DRAW"BM"+STR$(XL)+","+STR$(YL)+";":GOSUB1790
1670 RETURN
1680 ' ***********************
1690 ' ** QUIT VILLAGE/GAME **
1700 ' ***********************
1710 LINE(0,53)-(128,62),PRESET,BF
1720 A$="PRESS@A@TO@TRY@ANOTHER@VILLAGE@OR@E@TO@END":DRAW
"BMO,62;":GOSUB1870
1730 AA$=INKEY$
1740 IFAA$="A" THENRETURN ELSEIFAA$<>"E" THEN1730
1750 CLS
1760 END
1770 ' ***HI-RES TEXT***
1780 ' ***NUMBERS***
1790 FORI=1 TO LEN(A$)
1800 A1$=MID$(A$,I,1)
1810 IFA1$=" " THEN NEXT
1820 II=ASC(A1$)-19
1830 DRAW"BM+3,+0;"+CH$(II)
1840 NEXT
1850 RETURN
1860 ' ***LETTERS***
1870 FORI=1TOLEN(A$)
1880 A1$=MID$(A$,I,1)
1890 IFA1$="@" THEN II=1 ELSE IFA1$="." THEN II=2 ELSE II=
ASC(A1$)-62
1900 DRAW"BM+2,+0;"+CH$(II)
```

```
1910 NEXT
1920 RETURN
1930 ' ***********
1940 ' ** INPUT **
1950 ' ***********
1960 AA$=""
1970 LINE(0,62)-(128,53),PRESET,BF
1980 A$="COMMAND...@":DRAW"BM0,62;":GOSUB1860
1990 B$=INKEY$:IFB$="" THEN1990
2000 B=ASC(B$)
2010 IFB=13 AND (LEN(AA$)=2 OR AA$="H" OR AA$="F" OR AA$=
"S") THEN2120
2020 IFB=13 THEN2120
2030 IFB=8ANDAA$="" THEN1990
2040 IFB=8THENAA$=LEFT$(AA$,LEN(AA$)-1):A$=AA$:LINE-(52,53)
,PRESET,BF:DRAW"BM55,62;":IF (AA$<"A" OR AA$>"Z") AND AA$<>
"" THEN GOSUB1770 ELSE IF AA$>"9" AND AA$<>""THENGOSUB1860:
GOTO1990 ELSE GOTO1990
2050 IFLEN(AA$)=2 THEN1990
2060 IFF=0THEN IFB<65 OR B>90 THEN1990
2070 IFF=1THEN IFB<48 OR B>57 THEN1990
2080 IFF=2THEN IFB=78 OR B=89 THEN2100 ELSE1990
2090 IFF=3THEN IFB=65 OR (B>48 ANDB<=(CT+48))THEN2100
ELSE1990
2100 IFB$=>"0" AND B$<="9" THEN A$=B$:GOSUB1770 ELSE IFB$=>
"A" AND B$<="Z" THEN A$=B$:GOSUB1860 ELSE SOUND1,2
2110 AA$=AA$+B$:GOTO1990
2120 RETURN
2130 ' ***HELP!***
2140 PMODE4,5:SCREEN1,0
2150 IFINKEY$="" THEN2150
2160 PMODE4,1:SCREEN1,0
2170 RETURN
2180 A$="...A@DIRECT@HIT...":LINE(0,53)-(180,62),PRESET,
BF:DRAW"BM0,62;":GOSUB1860
2190 FORI=1TO50
2200 X=RND(12)
2210 PLAY"T255;O1;"+STR$(X)
2220 NEXTI
2230 PLAY"T15O2L2CL6CCCL4DCDL2EL6EEEL4FEFL2GL6GGGL4AGAL2
O3CL6CCCC"
2240 LINE(0,53)-(180,62),PRESET,BF
```

```
2250 A$="PRESS@ANY@KEY@TO@CONTINUE":DRAW"BM0,62;":GOSUB1860
2260 IFINKEY$="" THEN2260
2270 GOTO640
2280 ' ***DEFINE CHARS***
2290 FORI=1TO38
2300 READCH$(I)
2310 NEXT
2320 READHT$
2330 RETURN
2340 ' ***SPACE***
2350 DATA BR3
2360 ' ***FULL STOP***
2370 DATA BR1U1R1D1BR1
2380 ' ***LETTERS***
2390 DATA U4E1R1F1D2NL2D2
2400 DATA NR3U5R2D2NL2R1D3
```

```
2410 DATA NR3U5R3BD5
2420 DATA NR2U5R2F1D3BD1
2430 DATA NR3U3NR2U2R3BD5
2440 DATA U2NR2U3R3BD5
2450 DATA BU1U3E1R2BD3NL1D2NL2
2460 DATA U3NU2R3NU2D3
2470 DATA BU5BR1R1NR1D5NL1R1
2480 DATA R1E1U4NL2R1BD5
2490 DATA U2NU3R1U1NE2D1F2
2500 DATA NU5R3
2510 DATA U4NU1R3NU1D4
2520 DATA U4NU1R1D1C0R1C5R1NU2D3
2530 DATA NR3U5R3D5
2540 DATA U2NR2U3R2F1D1BD3
2550 DATA BU1U3E1R1F1D4L1NL1U1R1D1
```

```
2560 DATA U2NR2U3R2F1D1G1D1F1
2570 DATA BU1F1R1E1H3E1R1F1BD4
2580 DATA BU5R2NR1D5BR1
2590 DATA BU1U4BD5BR1R1E1U4BD5
2600 DATA BU5D1F1D1F1D1BR1BU2U3BD5
2610 DATA U1NU4R3NU4D1
2620 DATA U1BU3U1BR3D1BD3D1BU2BL1L1U1R1BR1BD3
2630 DATA BU4U1BR3D1G1NL1D3BR1
2640 DATA NR3U1E3U1NL3BD5
2650 REM *** NUMBERS ***
2660 DATA BU1U3E1R1D1ND1R1D3G1L1NU2BR2
2670 DATA BR1R1U4NU1NL1D4R1
2680 DATA NR3U1E3H1L1G1BR3BD4
2690 DATA BU1F1R1E1U2NL1U1H1L1G1BR3BD4
2700 DATA BU2NU3R2NU2ND2R1BD2
2710 DATA BU1F1R1E1U1H1L2U2R3BD5
2720 DATA BR1R1E1U1H1L2ND2U1E1R1BF1BD4
2730 DATA U1E3U1NL3BD5
2740 DATA BU1U1E1R1E1H1L1G1F1R1F1D1G1NL1BR1
2750 DATA BU3U1E1R1F1D2NL2D2
2760 ' ***HUT***
2770 DATA BU4E1D5R1U6E1D5ND2R1U5F1D6R1U5F1BD4
*
```

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Adventure Contact

To help puzzled adventurers further, we are instituting an Adventure Helpline — simply fill in the coupon below, stating the name of the adventure, your problem and your name and address, and send it to Dragon User Adventure Helpine, 49 Alexandra Road, Hounslow, Middx TW3 4HP. As soon as enough entries have arrived, we will start printing them in the magazine.

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....

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....

The Comms column will be back next month

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Write down your problem on the coupon below (make it as brief and legible as possible) together with your name and address and send it to Communication, 49 Alexandra Road, Hounslow, Middx TW3 4HP.

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....

....

....

Name ....

Address ....

....

....

Dragonsoft

New software for review should be sent to *Dragon User*,
49 Alexandra Road, Hounslow, Middlesex TW3 4HP

Not for the faint

Program: *The Curse of Camarc*
Supplier: Orange Software, The Garth, Star Road, Nant-y-Derry, Abergavenny, Gwent NP7 9D.
Price: £5.99 (+ 50p P&P)

THIS is another offering from K Hunter who also produced *Sherlock*, though this is definitely not a utility. It is an adventure game operating under FLEX, and utilises a massive 47K machine code plus a further 10K in the command space. The instructions tell you not to remove the disc as it is used as virtual memory at various times during the game (which is hardly surprising). The disc is not protected so it is strongly advised to make a back-up copy and use that rather than the original.

What -of the game itself? There are over twenty characters in the game most of whom move above in their own territories, some that are useful at different stages of the game, and some downright dangerous ones. You are told that you have just come of age and being the eldest living relative of King Lembor's former champion, you have been summoned to appear before the King.

Unfortunately of course the game contains well over one hundred atmospheric locations and all you are given in a very rough map of the terrain.

Rough it certainly is, especially the Brithdie Mountains and the Uncharted territories. The woods, the forests and the Achadm Moor do nothing to change the definition. The game has a large vocabulary and it is well worth trying alternatives if you get stuck. Regrettably the game is an old-fashioned, all text game and as such is uninspiring, but persevere because once you get into it the hours do roll by.

Along the way you will meet a drunken dwarf, an innkepper, a goblin, a wizard that keeps changing form, an elf, a hermit and if you are very lucky, the King, but you will have to deal with a spider, an evil basilisk, a mongoose who may or may not be useful in a certain situation and of course you will get killed. Howe.ver, if you are lucky you will be reincarnated several times, find weapons, make use of nature's products to aid you along the way, and of course you will have to cross the inevitable river. So I shall not give you any more clues. This game is definitely not for the faint-hearted and if your spouse is still talking to you when you have completed it then you will fare better than I did.

R L N Hewson

Not so mysterious

Program: *Sherlock*
Supplier: Orange Software, The Garth, Star Road, Nant-y-Derry, Abergavenny, Gwent NP7 9DP
Price: £5.99 (+ 50p P&P)

SHERLOCK is not, as the name might suggest, an adventure game by the redoubtable occupant of 221b Baker Street, but a complete disc 'detective' written by K Hunter which operates under FLEX. It operates by using its own sector buffer which is read from the FLEX sector buffer, and if required written back to disc after editing. Changes to the shown buffer will not affect the disc unless the Write command is used. This buffer is read from disc by the displayed track and sector. All other programs use track and sector but not all of them update the *Sherlock* buffer so certain of the *Sherlock* programs and recovery from disc errors may leave information in the displayed buffer that does not match the shown track and sector.

This sounds very confusing on paper (*You don't say. . .*) but isn't when actually in use. If however there is any doubt, use the Read command to update the buffer shown on the screen.

There are five main functions, Analyst, Director, Inspector, Searcher and Tracer. (Searcher and Tracer always enter *Sherlock* showing the correct buffer contents.)

Sherlock will only allow the use of two disc drives (0 or 1) but will permit commands in upper or lower case. The commands themselves can be what I shall call normal or what the instructions call 'External'. The normal commands are single letter alpha commands or the arrow keys, plus shift, and Break, and Escape. These commands will change the drive number, edit the sector information displayed, enable the Help information display, update the current disc format information, toggle the screen display between hex only and Ascii/hex, read into the buffer the next logical sector in a file, print contents of the sector buffer to an online printer, and so on. The external *Sherlock* commands use control keys X called by pressing Clear and the appropriate key.

Sherlock will allow you to permanently customise it to your printer although by use of the LC7 command it will allow you to change formatting to enlarged print or to condensed print.

Overall this disc investigation system compares with such programs as *Disk Doctor*, and can be used to rebuild directories, to recover files and discs, to edit programs still on disc, to change text within machine code programs, to bypass bad sectors to recover text files, and verify sectors on disc or even to undelete files. Altogether the package is very well put together, the instructions are clear, comprehensible and comprehensive, and I feel sure that it will save many hours of work for those that use it, and once again compared with prices of almost £20 for similar programs under DragonDos this program offers real value at £5.99 (plus 50p postage and packing).

R L N Hewson

Large!

Program: *Utopia*
Supplier: Pulser Softwarem 36 Foxhill, High Crompton, Shaw, Oldham OL2 7NQ
Price: £5.99

MANY years ago, your ancestors constructed an ideal world. It was necessary to construct an elaborate defence system to 'keep out evil influences'. Now as the place has fallen into disrepair you begin to wonder whether this defence system was devised to keep you in. This is the scenario of *Utopia* from Pulser Software, a game so large that the disc version requires string space to be cleared down to ten bytes.

The idea is that you should pilot your space ship through a maze, avoiding both solid objects and the pilotless khamikazi droid ships which steer a random course. Your ship is equipped with steering and laser only. There are five stages to complete, each of which presents its own special problem. Some are very long, so fuel is important; others are just plain difficult.

Graphics are quite good, if a little jerky. The droid ships do not visually explode — when hit they just disappear.

Personally I found it quite irritating being put back to the beginning of the current stage every time the ship was destroyed. Still, this is better than having your new ship materialise in the same place as the old one, only to be destroyed again. Speed is the key to this game and for this reason I would recommend that you use a self-centering/switch type joystick.

Overall this is a good game to play, which presents a real challenge.

Finally a kind word for those nice people at Pulser. I had a slight problem with Duncan which resulted in a peculiar stick response. Thinking it might be a software problem I took up the matter with Pulser. In spite of the fact that my hardware was at fault, a replacement disc was sent by return of post. Now that is what I call service, thanks guys. As it turned out they were right and Duncan is feeling much better now.

Ken G. Smith

Write: ADVENTURE

***Pete Gerrard** goes in search of a role in life*

THE straightforward adventure scenario of the *Colossal Cave* variety has been with us for some little while now, and has spawned endless variations on a theme. Most, if not all, of the standard adventure games currently available owe more than a few gold nuggets to that very first game by Crowther and Woods. That it was originally played on a mainframe rather than a home computer, that it was Scott Adams who really deserves the credit for producing adventure games on (initially) computers with only 16K of Ram, is immaterial. *Zork* followed *Colossal Cave*, Infocom was born, and even if you don't like Scott Adams' adventures at least you have to honour him as having got the whole thing going.

Over the years a few changes have been made to the standard adventure setting, without radically departing from the main format. There is something of a quest involved, communication with the controlling computer is via a 'parser' of varying degrees of intelligence, and although graphics played no part in the original game some companies (and seemingly ALL distributors) insist that a game these days does indeed come supplied with graphics. We've argued that point often enough in the past not to bother with it again.

Or Thorins

In the last couple of years, though, some major additions have been made without altering the setting to any great degree. The principal of these is the emergence of what some companies refer to as 'pets'. These are characters who follow the hero (i.e. you) around, and behave in an artificially intelligent manner. Some do add greatly to the fun and humour of the game, others seem only to be there because other games also feature them. Sometimes they are necessary for the solving of the quest and must be told to do a variety of things, others just wander around, occasionally getting in the way and coming out with a few wry comments.

The second major change was to introduce an element of role playing, of the Dungeons and Dragons variety. This is an interesting cyclical point, because *Colossal Cave* was originally spawned from a desire to play Dungeons and Dragons on a computer, without the tedium of all the hand drawn work that has to be done to look after and control a standard D and D game. To replace the traditional Dungeonmaster, in other words, the man or woman who directs operations and relays to the human players information about their surroundings, strength, opponents who are waiting to fight them, and so on.

A brief foray into the so-called "arcade adventures" can be more or less dismissed as having nothing to do with classical adventure games. They owe a lot more to arcade than adventure, which is not to deny the fun that can be had from playing them. I just wish they'd called them something else. No, the real adventure progress has been from *Colossal Cave* to the heights of Infocom, the addition of 'pets' and the re-introduction of role playing as a major part of the game.

Two main roles

This role playing aspect can take many forms, and it is these that we shall be considering for the rest of the article. Generally speaking, there are two main types of role playing game, at least as far as adventures go. There can either be one player, whose attributes change according to the progress made or more usually the lack of it, and this is more in line with traditional adventure playing: a single player, alone or with friends, doing battle against the problems set before him. Or, and this type seems to be increasing greatly in popularity at the moment, the player actually takes no part in the game as himself, but is instead in charge of a party of four or more individuals whose actions he has to control in order to get them to solve the mission set out before them. We shall be looking at both types.

Before looking at the differences, let's take a glance at the similarities. Chief amongst these is that each person in the game, whether alone or in a group, comes equipped with a set of attributes which to a greater or lesser attempt controls that person's performance. These are usually based on the original Dungeons and Dragons format, where six attributes were assigned to each member of the game. However, times change, and although they may still be based on that original design the names given to the attributes vary widely.

Nevertheless, strength is usually one of them. A person's strength is obviously of great importance in determining whether or not various problems can be tackled. These attributes are often rated on a scale of 1 to 6, or worked out as a percentage, with the higher number indicating (in this case) the greater strength. A strong player might be able to lift a heavy object that would be beyond the power of a weaker one, or two or more players may combine forces and lift the object that way. As with all these attributes they may change as the game progresses. If the player goes a long time without food or water, for instance, then the strength would undoubtedly decrease. On the other hand, a hearty meal would soon send it soaring again.

Another common attribute is nearly always stamina. This governs a player's ability to carry on when all around him are dropping like flies. He would be able to persevere for greater lengths of time without food and water, he would be able to engage in combat for longer than a player of lesser stamina, he would be able to make greater journeys and suffer less fatigue, and so on. By the way, 'he' is used to save me repeatedly typing 'he/she'. I have no wish to offend Helen 'Trollslayer' Armstrong, for example.

A third attribute that is usually seen in one form or another is dexterity. This covers many things. A dexterous player would be able to spot an exit with ease, whereas a clumsy one would trip over a matchstick and fall headfirst into a trap. Similarly, a dexterous person would be better equipped to, for instance, make a fishing rod out of a snooker cue, a needle, and some thread. A clumsy person would make a mess.

Also in there, and considered as one of the most important attributes of all, is intelligence. This can be used to subtly combine with any or all of the other attributes. An intelligent person may think of making a fishing rod as described above, but lack of dexterity might prevent him from doing so. A dull person with high stamina would plod on for miles and miles, an intelligent one with low stamina might look for something to eat. This subtle interweaving of attributes is of great interest in games of this genre.

Courage in fashion

The other two of the six seem to vary from game to game, although courage is often to be found in some sort of fashion. A player of great courage would think nothing of attacking a malevolent orc with a matchstick, but a cowardly one would probably run a mile. If he had the stamina.

The final one of these six is definitely up to the individual, and as one example we could have a magic attribute, the ability to cast magic spells. Wizards and magicians working their way up the spell ladder would start off with a relatively low magic attribute (perhaps just the ability to cast a fire spell, or something) and gradually go up rung by rung as they gained more experience. Experience itself is often an attribute but I'll stick to magic.

So, you might think, why not just start off your game with either the individual character or the entire group having maximum values for each attribute? Ah, life is never that easy. The numbers 1 to 6 are used because attribute values were sometimes determined by the throw of a die. The average number on each dice face is 3.5, 3.5 times 6 gives us 21, and so one popular rule is that no player may start a game with a total attribute value greater than 21. Sometimes the program decides randomly, sometimes the player is allowed to choose, and in our small example listing it is left up to the player to name each character and then alot the attribute values.

In this example just two players are used, it could easily be a party of four or just one on his own. By going somewhere in the middle you should be able to see what I'm on about.

The data statements at the end, in lines 1000 and 1010, contain the names of our chosen attributes. The array for holding these, and the attribute values, is dimensioned in line 40 and the values read in by line 50. The characters are alloted names in lines 70 to 100, and after some information in lines 110 to 180 the actual attribute values are input by the player in lines 190 to 220 and checked in lines 230 to 260. Provided that all is well we reach a successful conclusion in line 270, and then the data could all be filed away on tape ready to start the game proper.

Role playing games, or RPGs, are a fascinating development on the traditional adventure game. There are a number of dedicated magazines available on the topic, and it is one that we shall be returning to next month.

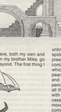
Pete Gerrard's Adventure Trail

By the time you read this, the wretched postal dispute will (hopefully) have been completely resolved. However, at the time of writing it is still very much among us, post boxes are sealed up everywhere, and only the occasional bill is getting delivered. This is alarming, not least of the many reasons being that next door's dog has now failed to eat a postman for several weeks, and is looking alarmingly like it is turning its attentions towards *Dragon User* contributors. If anyone living in the area in or around Wigan notices a bearded chap with shoulder length hair, glasses, wearing a denim jacket and scarred denim jeans, hobbling painfully and with blood dripping from an open wound while carrying a jiffy bag bearing the name Helen Armstrong, you'll know it's me.

Golden oldies

So, in the absence of any postal contributions, I've decided to look back over all the queries that have flooded in over the years to the *Adventure Trail*, and reflect on a goodly dozen of the older games. If you've solved them all then you either wrote the letters or you're a smart Alec who deserves to have Huey the robot come round and beat you up.

The files that I have, both my own and those inherited from my brother Mike, go back to 1985 and beyond. The first thing I found, though, was dated 5th Feb. 1986 and was connected with the original *Colossal Cave* adventure. Attached to the letter was an unbelievable map, drawn by an unknown hand. Several ink-dipped spiders could have fared no worse, but presumably it was attached because it also contains the solution to the end game, which is the point where most people appear to get stuck. When you arrive at the end game, after completing a certain percentage of the game and discovering all the treasures, you are in a repository with a NE corner and a SW one. To successfully conclude the game you must move all the rods to the NE corner. The command to use is SAY "BLAST", which is not a rude word but an instruction to detonate some dynamite. If you're carrying the rod with the star, you'll be killed in the explosion. If you're at the NE corner then you'll be killed by lava, but if you're at the SW corner a horde of cheering elves will descend and carry you off in triumph. Isn't that nice?



Five clues

Anyone remember Operation Safras? The files divulge their secrets. In part 1, the code is unlucky for some (binary). Fairly simple one to decipher, there. In part 2 you are looking for five agents, and the following five clues are supplied free of charge to anyone still searching. 1) You will find one where a seasonal cake comes from. 2) Another may be a member of a University boat team. 3) Another could be at a horse race meeting. 4) One more could possibly be a United fan (good man!). 5) Lastly, one agent might be a friend of Sir Francis Drake. So know you now.

Hints of ice

Someone called Darren Dollery, who lived in Hampshire at the time and may well still do so, seemed to be doing remarkably well on *The Ice Kingdom*. The following 8 hints are all from him. 1) To get past the bear you must give him the honey by the river in the bee hive. 2) Take the stick he was holding and go south. 3) To get past the snowman on the path type POINT STICK. 4) Take the poles in the castle. 5) When you see the small giant give him the poles in return for a casket. 6) When you see the persian rug type SIT RUG. 7) In the armoury you will see some tiger heads. Type PULL HEAD and a secret will appear. 8) The book on a pedestal in the garden lake is a red herring. The real one is in a cave. Take this and you have completed the game. Oh, reams of nostalgia.

Let's go back in time to the heady days of Salamander software selling oodles of games. Wings of War was a popular one, and to get your pass you need to bring your dictionary, go to the commandant, and say "heil". Turn the brackets next to the fireplace to find a car to escape in, and fix the officer's boot with the boot lace to get a key to start the car. Look at the flowers in your binoculars to find the switch, and you fix the container by using the wrench and a scrap of aluminium.

Lost in space

Lost in Space was another golden oldie, and to escape from the maze you must walk around and follow the word "Sparrowhawk" when you find it. You find the blue disc by inserting the white disk into the food machine and eating the pie, then you wave the blue disc in front of the door with the blue panel in order to open it. The black disc is to be found inside the security box which you will find behind the red panel. The password is, of course, Franklin. Wave the black disc in front of the door to the bridge to open it. Finally, to fly the ship, press the button behind the blue door to start the engines, go to the ship's helm and press the invisible button, and hey ho and away you go.

Weird of Kesh takes us back in time, and to take us into the game you need to take a tip and have a bath then perhaps you'll find what you need to strike a light and provide a crown for a smoking friend. Only magic, though, will get you past, and to find what it takes you'll need some inside information. Now you have it, what are you, some kind of hero or heroine, either way the answer is as old as the pyramids! Trapped? Don't be silly, something should ring a bell here, or even shed some light. No clues now, you need a staff in case.

The Thirteenth Task was an adventure game from the Scottish company Arc Software. This one saw us delving into the slightly murkier parts of the world, and encountering such characters as Cyclops (Throw Stake at this one), Muses (Sing or Dance and you'll soon get past them), Chimaera (Throw Water), and so on. Amazing the number of adventures that allow you to display hitherto unknown powers: here, you can quite cheerfully strangle a lion! You can also kill a Gorgon if you're wearing your helmet, showing your shield, and wielding your trusty sword. What an unsavoury collection of customers.

What next? Ah, January 1986 and someone from Coventry telling us all about the Caverns of Doom. Use the key found near the skeleton to open the tool chest. Examine the crumbling wall in the western area if you want to go swimming. Look under boat behind water fall if you want to move the raft over deep water. Shoot the large bear, and that sorts him out. You need tools, hammer, nails, saw, beams and rope to build the raft. Use the unbroken lamp. Examine the wall in the small room. Directions for exploration are D, N, N, N, NW, N, UP.

This same chap tells us that, in the *Mountains of Ket*, pour oil on the ramp to avoid the dragon, and to pass the wall in mint condition you must Carry Wand and say Polo! In the *Mansion of Doom* you should catch the mongoose with the open cage, drop the mongoose by the snake, you do not need the candle, the dictionary gives an alphabet, and open sack and drop it to cross acid. So now you know, folks.

When we do actually get some post delivered, Wintersoft's *Return of the Ring* is always a popular one. Secretive lot, Wintersoft, they give me a solution and then tell me not to publish it. All I can really say is that you have to reach a Gestalt Level of 12 before you can complete the game. Ha, I've just seen something. The Spell of Eviction can be used on the squatting mutant to gain the amulet. Wonder what certain landlords would do with one of those?

Old and new

Maridian (which, on looking at their strange letterhead, I thought for one bizarre moment said Marillion) produced *Underbeings of Croth*, also in 1986. How do you open the big door? Explore the pit for a useful object. What help is the ape-woman? Talk to her and explore the labyrinth. How do you escape from the top of the cage? Find something to drop into the pit, that's how. How do you leave the underground valley? Search inside the huts and then try and bridge the canyon. Easy, really, do it all the time in Wigan.

Well, that's your 12 adventures covered, and my spelling checker and word counter tells me that I've just about reached my monthly limit of 1,500 words. I hope all of the above might persuade some of you to blow the dust of those older adventures that you've neglected for the past umpteen months, and have another crack at them if you never solved them. Hopefully the postal dispute will sort itself out and we can get back to something approaching normality next time around. Well, as normal as we ever get, anyway. Until the next time!

What's a word worth?

With or without a computer, the words count up your score

OVER the past five years the Christmas issue of *Dragon User* has featured a computer game or puzzle on the competition page. This year is no exception, with an updated electronic version of an old 'pencil and paper' game called 'Crosswords'. It is also known by the alternative name of 'Wordsworth'. I will first describe the rules of the original game and then outline the modifications to make the computerised version that little bit more difficult.

To play each player draws a 5 by 5 grid on a piece of paper. The first player calls out a letter of the alphabet which is then entered by all of the players into their own grid in any position that they choose. The players take it in turn to call a letter, and play proceeds until the grids are filled. The object is to enter the letters in order to make as many words as possible reading across the lines or vertically downwards from top to bottom.

An, ran, rang . . .

The words must be of two or more letters and they score as many points as there are letters in the word. A bonus is awarded for any five-letter words - these score six points. A typical completed grid might be like the one shown. The second row contains the words an, ran, rang and range. and so would score a total of 15 points. The second column would score 10 with as, at, gas and sat. Plurals and proper names are not allowed (so no score for 'Stan' on the bottom row). The five rows and five columns are then added up to find the total score. The winner is usually taken as the one who scores the highest total. Alternatively, a series of games can be played, the object being to have a cumulative total of over a specified score (say 500). If a word occurs more than once in the grid it can score additional points. In the example given, the word 'an' is found twice, and so will count a total of 4.

The computer version can be played by two or more players each using the com-

```
  10 DIM A(5,5):CLEAR:C=0:Z=RND(-TIMER):GOSUB 1000
 100 M=4:M$="YOUR MOVE":GOSUB 1100
 110 M=6:M$="SELECT A LETTER":GOSUB 1100
 120 Z$=INKEY$:IF Z$=""THEN 120
 130 IF Z$<"A"OR Z$>"Z"THEN 120
 140 M$="POSITION THE "+Z$:GOSUB 1100:X=2:Y=2:R=ASC(Z$)
 150 L=A(X-1,Y-1):P=X*2+382:Q=94:GOSUB 1200:P=Y*64-52:Q=95:
     GOSUB 1200
 160 A$=INKEY$:IF A$=""THEN 160
 170 Q=32:GOSUB 1200:P=X*2+382:GOSUB 1200
 180 IF ASC(A$)=94 THEN X=X+1:IF X=7 THEN X=2
 190 IF ASC(A$)=8 THEN Y=Y+1:IF Y=7 THEN Y=2
 200 IF ASC(A$)=13 THEN 300
 210 GOTO 150
 220 M=4:M$="GRID FULL":GOSUB 1100:M=6:M$="COUNT YOUR SCORE
     ":GOSUB 1100
 230 M=8:M$="ANOTHER GAME Y/N":GOSUB 1100
 240 A$=INKEY$:IF A$=""THEN 240
 250 IF A$="Y"THEN RUN ELSE END
 300 IF L<>0 THEN M=6:M$="TRY AGAIN!!!":GOSUB 1100:FOR N=1
     TO 2000:NEXT:GOTO 140
 310 C=C+1:P=Y*64+X*2-66:Q=R:GOSUB 1200:A(X-1,Y-1)=R
 320 IF C=13 THEN 220 ELSE M=4:M$="MY TURN":GOSUB 1100
 330 Q=RND(26)+64:M=6:M$="MY LETTER IS "+CHR$(Q):GOSUB 1100
 340 X=RND(5):Y=RND(5):IF A(X,Y)<>0 THEN 340
 350 FOR N=1 TO 2000:NEXT
 360 A(X,Y)=Q:X=X+1:Y=Y+1:P=Y*64+X*2-66:GOSUB 1200:GOTO 100
1000 CLS:L$=STRING$(11,128)
1010 FOR Y=1 TO 11:PRINT@(Y*32+1),L$:NEXT
1020 FOR Y=2 TO 10 STEP 2:FOR X=2 TO 10 STEP 2
1030 PRINT@(Y*32+X)," ";:NEXT:NEXT:RETURN
1100 PRINT@(M*32+13),STRING$(18,143)
1110 PRINT@(M*32+14),M$;:RETURN
1200 PRINT@P,CHR$(Q);:RETURN
```

Prize

LET this be a warning against efficiency. I typed out this month's Comp and Ans many days ago. Today, I find I've typed the Ans twice, lost a Winners and Losers which didn't exist, and forgetten what the Comp was about.

Let us pull ourselves together, computer, and recall: ah yes! it concerns the game of 'Crosswords' or, for those who can't pronounce it properly, 'Worthwords'.

With a fine eye for decorum and detail, since this month's comp is about words and doesn't require a computer, we have for you ten copies of the new computer accountancy package from **New Era Publications**, *Accountancy Plus* by Michael McCullough. Watch *Dragon User* for a review as soon as the program is released.

Rules

WHEN you have finished reading from left to right, right to left, down, up and sidewards, *if* you can still see straight, write down your score and your workings and send them to us at the usual place in an envelope marked DECEMBER COMPETITION. Go to it, Stan.

Now for the tiebreaker. Using your skill and judgement, think of an eye-catching slogan that we can use to promote the *next* national Dragon show - then go out and try it on your friends and see if it gets them pedalling off the Weston-super-Mare.

September winners

A high proportion of right answers on this comp - a couple of silly clangers and one chap who got lost in the grammar somewhere, but otherwise most people identified (by various means) the fraction as 2143/22. Winners of free tickets to the **Colour Computer Convention** in Weston-super-Mare are:

Fred Willers of Yarnfield, Dick Scarborough of Nelson, Don Robertson of Epsom, Stewart Orchard of Thetford, Terry Fawcett of Hendon, D J Gray of Middlesborough, Paul Weedon of Wooton-under-Edge, Ted Newman of Addlestone, Eric Morris of Luton and S A Siddiqui of Chiswick.

Fred Willers actually did what we thought none would dare, and wrote a poem, which went:

Not a word! I sleep unstirred
By bustle, noise and tread.
Wheezily breathing, snoring unceasing,
Let me be, hungover, dead.
Optics of spirit, fine and red,
Schnapps new in glasses, enjoyment ahead!
Absorption! My pleasure foresaid.

We bet Fred writes for *New Statesman*. Nearest to our heart was D J Gray's *FAST-BREAK - Find A Stupid Tiebreak Requirement Every Attempted Kompetition*. We bet D J reads *Kerrangg*.

Solution

See opposite.

puter in turn, or a single player trying to beat his own personal best score. When the listing is run, the empty grid is drawn and the player is given first choice of a letter. This is selected by pressing the appropriate key. It must then be placed on the grid by lining up the two arrows displayed on screen. The 'horizontal arrow' is moved by pressing the horizontal arrow key and the 'vertical arrow' by the vertical arrow key. Once there are moved to mark the coordinates of the position required, the letter is inserted using the 'enter' key. It is then the computer's turn to select a letter. Unlike the original game, the computer also selects and positions its choice of letter in a vacant square. This may make the game that little bit more difficult as the player might find certain words 'blocked' by the computer's choice of square! When the grid is filled with 25 letters, the player should then total up the score).

E	G	I	A	H
R	A	N	G	E
A	S	I	E	R
H	A	L	L	H
S	T	A	N	L

The competition this month is one of those rare events that will not necessarily need a computer - so you can give it a well-earned rest (unless it is busy playing 'Wordsworth'). You will need instead twenty-six squares of card each bearing a different letter of the alphabet. As an alternative, you can use *Scrabble* tiles instead - just take on of each letter. The object of the competition is to use 25 of the 26 letters in a 5 by 5 grid so as to score the maximum number of points, scoring as outlined in the game above. One of the letters (probably a Q, X or Z) will be unused - the choice as to which this is will be left to you. To enter, copy out your grid and list the component words - remember, no proper nouns, foreign words other than those in regular use in English, or plurals - and any obscure words should have a dictionary reference added (*Or a jolly good explanation. The OED will be the final arbiter. - Ed.*). Add up the total score and mark it clearly at the top of the page. Don't forget that any five-letter words will score *six* points. **To permit the maximum number of points to be scored, we will also allow words to be read from right to left, from the bottom upwards, or in a diagonal, like a wordsearch.** For example, on the grid printed above we would also find the words 'share' and 'leg' (reading upwards), and 'all' and 'hen' (diagonally). Note that this grid itself would not be valid as an entry as it does not contain 25 *different* letters - the words were just given as an illustration of the method of scoring.

The winner is, of course, the person with the largest number of words in one grid.

The Answer

This is Gordon Lee's own
solution to the September competition
see page 26 for results

ANSWER: The best approximation is found by using the fraction 2143/22

```
100 PI=3.141592653589
110 C=2*PI*3960
120 C=C*63360:REM Convert to inches
130 X=PI*PI*PI*PI
140 D=2
150 N=D*X:REM Calculate Numerator
160 N=INT(N+0.5):REM Round to whole number
170 Z=SQR(SQR(N/D)):REM Approximate value for pi
180 B=2*Z*3960:REM Compute approx. circumference
190 B=B*63360
200 DIFF=ABS(C-B)
210 IF DIFF<1 THEN PRINT N;"/";D:END
220 D=D+1:GOTO 150
```

SOLUTION: We are required to find the simplest fraction which will give a value for pi which is accurate enough to measure the earth's circumference to within one inch. (It is assumed that the earth is a smooth sphere with a radius of 3960 miles.) In the program, lines 100 to 120 calculate the correct value of such a circumference using a known value of pi to an accuracy of 12 decimal places. Anything with a greater accuracy would be beyond the normal arithmetic accuracy of an eight-bit micro. This circumference is converted to inches and is stored as variable C.

We are looking for a simple fraction with a numerator (N) and a denominator (D), both of these values being as simple as possible. The square root of the square root of this value should be an accurate representation of pi, so the fraction itself should be approximately equivalent to pi raised to the fourth power. If X is denoted as this value, then N/D = X, or , put the other way round, N = D * X. It is using this formula that line 150 caculates possible numerators. This is done by taking a sequence of denominators, commencing at 2 and finding the related numerator required to obtain an approximation of X. Now, the question requires this value to be a whole number, so the computed value is rounded to the nearest whole number (line 160). We now have a possible pair of values for both the numerator and the denominator, so we use this (line 170) to find Z, our approximation of pi. This value is then used to calculate the number of inches in the circumference of a circle, radius 3960 miles. The difference between this and the value from line 120 is compared. Use the ABS(olute) command to get a positive result. If this is less than 1 the numerator and denominator are printed.

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